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Vol. LXXXV, No. 9 SEPTEMBER 1, 1927 Per annum $4.00 Per Copy 10 Cents

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Chicago Belting Company belts are recognized the world over as the highest quality and most economical of all belting

Specialists in paper and pulp mill belting

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Manufacturers of Leather Belting

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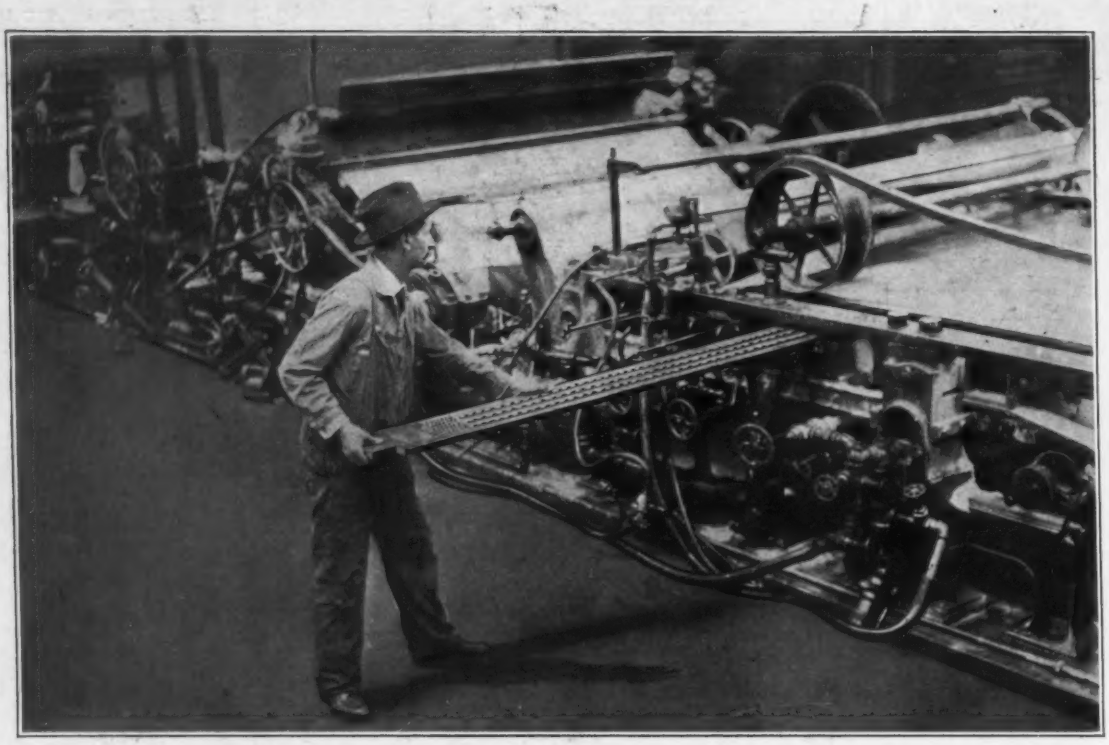

An Interchangeable Cover for Suction Boxes

The Keystone Suction Box Cover consists of a tapered, dovetail frame which is mounted on the top of the suction box. The wood cover fits the tapered frame, and a few taps on the front end are sufficient to make same tight. No screws are used, therefore the cover can be removed and replaced without removing the suction box and without stopping the machine.

Furthermore, due to the elimination of the screws and countersunk screw holes, damage to the wire from this source is eliminated.

Another advantage of the Keystone Cover is that more uniform suction can be maintained due to the improved arrangement of cover supports, which allows for unobstructed passage the entire length of the box to suction connections.

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Paper and Pulp Mill Machinery

EAST DOWNINGTOWN, PA., U. S. A.

Entered as second class matter August 13, 1925, at the Post Office at East Stroudsburg, Pa., under Act of Congress of March 3, 1879. ESTABLISHED 1872 FIFTY-SIXTH YEAR Published every Thursday by the Lockwood Trade Journal Co., at 34 N. Crystal St., E. Stroudsburg, Pa.
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Inadequate or poorly designed ash handling systems eat up profit in the Power Plant, just as surely as does a large amount of broke in the Machine Room. Unquestionably water leaking from ash hoppers and gates, spilled ashes and puddles on the floor, fog, fumes, etc., are not conducive to economical ash handling or satisfied labor.

Compare conditions in your ash basement with those in the above photograph. A-S-H Cast Iron Ash Hoppers and Type "C" Ash Gates collect all the quenching water and assure a clean, dry ash basement.

This equipment is suitable for new or existing plants whether pulverized fuel, stoker or hand fired; its cost is moderate and it can be installed without shutting down the power plant.

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Belt-driven Nash Hytor Vacuum Pump, used with a suction couch, and capable of handling 900 cu. ft. per min. at 12 in. vacuum and 310 R.P.M.

HERE is a typical installation of a belt-driven Nash Hytor Vacuum Pump handling water from suction couch rolls in a well known middle-western paper mill.

Nash Pumps are widely used for this purpose. Suction is steady and non-pulsating and is a big aid in speeding up the dewatering of the paper web.

Either belt or steam turbine drive may be used, or the Nash Hytor may be direct connected to an electric motor. For details of construction, principle of operation, sizes and capacities, write for a copy of our bulletin.

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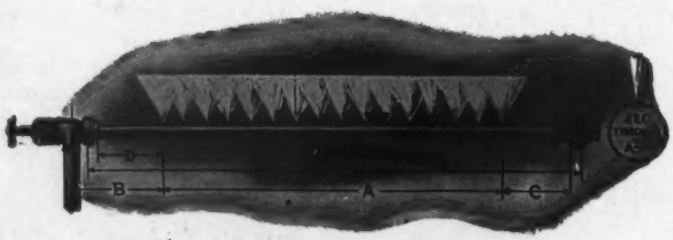
Nash Hytor

VACUUM PUMPS AND COMPRESSORS

THE "RAINSTORM" SHOWER PIPE



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ESTABLISHED 1828

A Complete Line of Paper Bag Making Machinery

BUILDERS OF DEPENDABLE MACHINERY FOR THE PAPER MILL

The Undercut Trimmer

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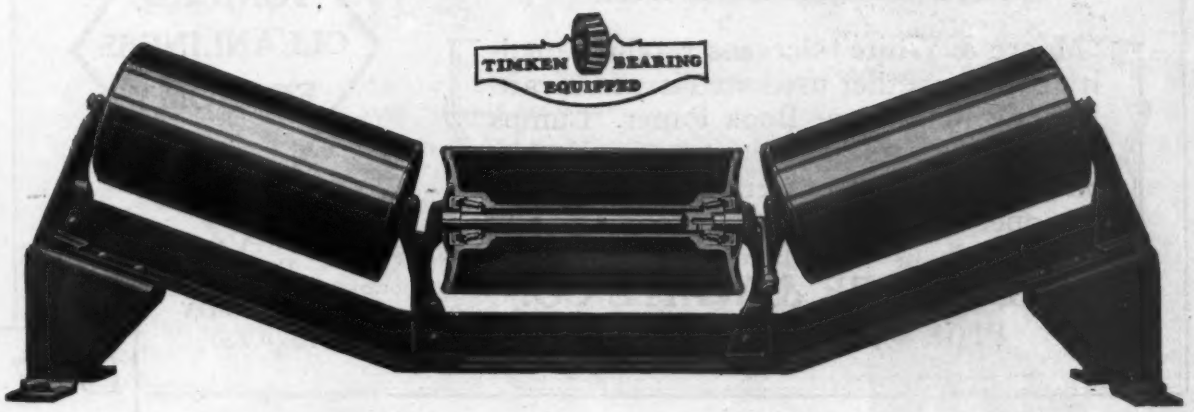
LINK-BELT
Anti-Friction Belt Conveyor Idler



IN the Link-Belt Anti-Friction Belt Conveyor Idler, we have embodied the engineering and manufacturing experience of a generation in the development of this type of equipment.

As a result of that experience, this idler is manufactured to the closest working tolerances ever attempted. Bearings completely protected.

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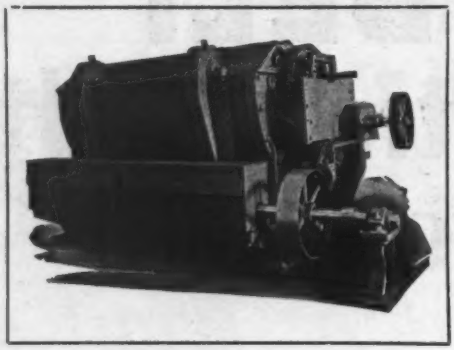
1885



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"Moore & White" Screens produce quality paper whether used on Tissues, Kraft, Roofing Manilas or Book Paper. Lumps and slime spots are eliminated. Breaks on paper are thus prevented and continuous operation is assured.

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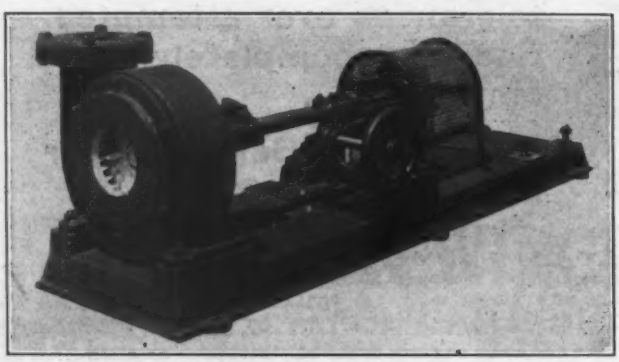

The Bahr Centrifugal Refiner, belt driven or direct connected to motor.

Give your stock a last brushing, refining just before going onto the wire, with the result, higher feet per minute with less pickups at the press and a better product.

We solicit your inquiries and orders

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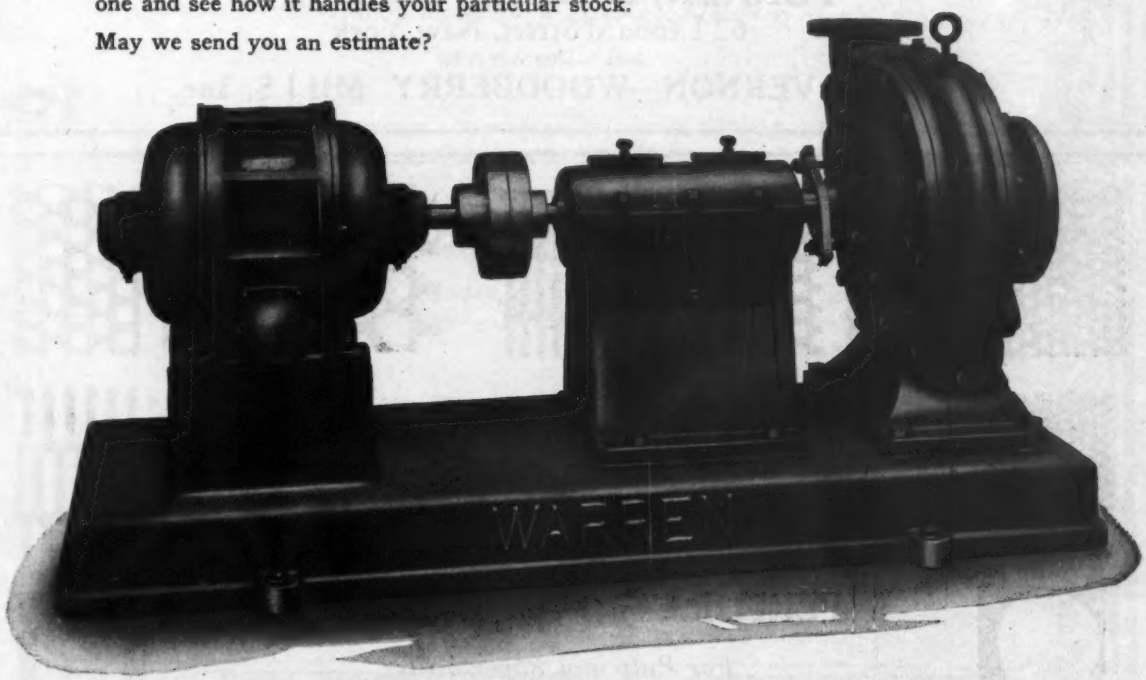
Stuff Pumps
keep you out of trouble

Continuous production is the goal of every efficiently operated mill. You've got to keep the stuff coming.

Warren Stuff Pumps are as continuously dependable as skill and experience can make them. They are built to handle smoothly all consistencies of stock up to 5% and more.

Pulp and paper makers who have tried the Warren Stuff Pump are putting them in throughout the mill. Why not try one and see how it handles your particular stock.

May we send you an estimate?



Warren

1018

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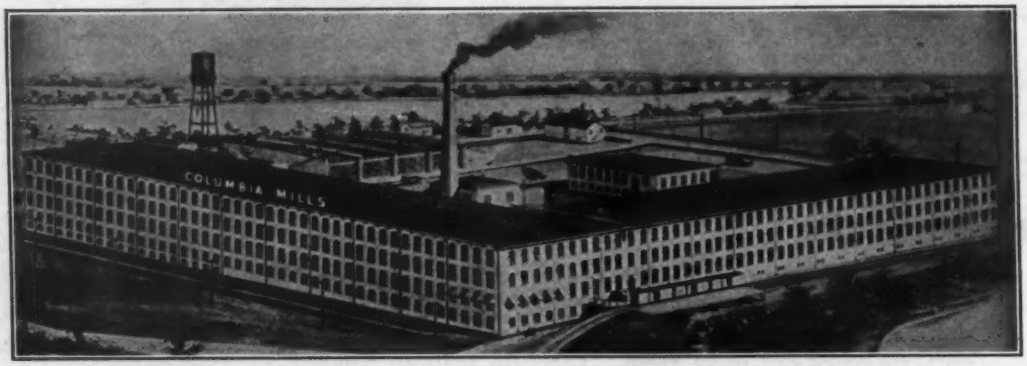
COTTON DRYER FELTS

"Mt. Vernon" Standard Weave
Medium—Standard—Extra Heavy
Widths 36" to 164"

"Richland" Triplex Weave
Widths 68" to 210"

Felts within above ranges made in lengths as required



Columbia, S. C., Plant of Mt. Vernon—Woodberry Mills, Inc., Baltimore—where "Richland" Felts are made

Orders must be placed sufficiently in advance to insure satisfactory delivery

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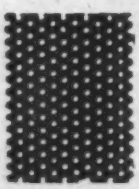
MT. VERNON—WOODBERRY MILLS, Inc.



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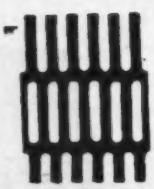

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For Pulp and Paper Mills

For Centrifugal and Rotary Screens—Drainer Bottoms
Filter Plates—Pulp Washers—Dryers, &c.

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THE HARRINGTON & KING PERFORATING CO.

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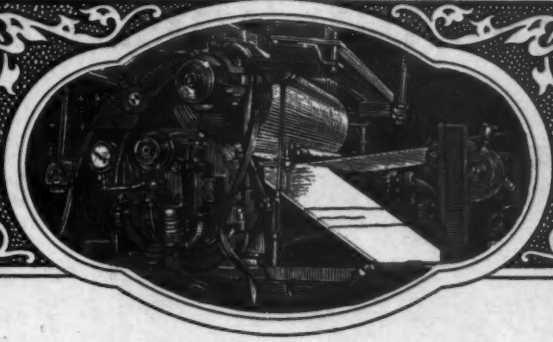


Here is everything you want in a felt

STRENGTH, water removing qualities, and long life—those three points include every element a good paper making felt ought to have.

And you get them to their fullest extent in Hamilton Felts.

You'll find that Hamilton Felts run longer with less down time for washing. They take out more water so that there is less sweating to be done in the dryers. They deliver a stronger sheet to the dryers so that there is less broke and fewer imperfect sheets to be sold as scrap or seconds.

That's because Hamilton Felts are built of experience—three generations of it devoted solely to the manufacture of paper making felts.

Try a Hamilton the next time you need a felt. It only takes that single trial to convince yourself that there are felts and felts—that the Hamilton is the one you want to use.

Ask the Hamilton Felt man who calls on you. He's a practical felt man and will give you felts that suit your individual needs.

Shuler & Benninghofen, Hamilton, Ohio

Miami Woolen Mills - Founded 1858.

Hamilton Felts

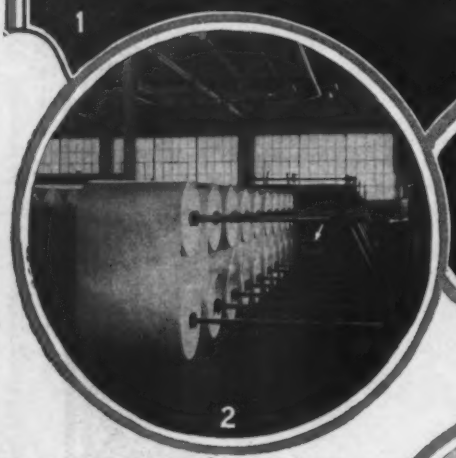
One of the many finishing rooms

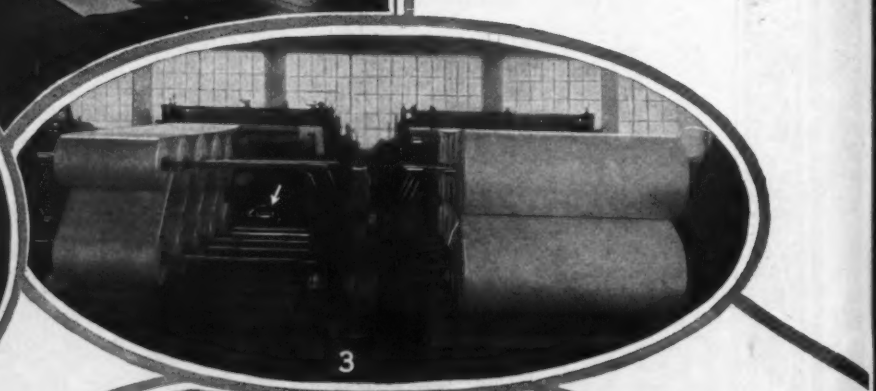
1. *General view of finishing room showing four Seybold Trimmers in foreground. Each trimmer is operated by a 7½-h.p., Type KT motor and push-button operated magnetic control.*

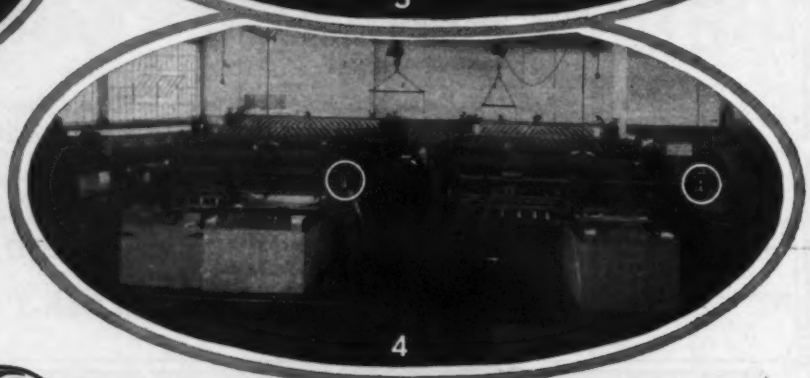
2. *20-roll cutter operated by a 15-h.p. direct-current motor and push-button control.*

3. *Two 10-roll cutters, each operated by a 15-h.p. direct-current motor and push-button control.*

4. *Two lay boys, each driven by the 15-h.p. motor which operates the adjoining cutter.*







Apply the proper G-E motor and the correct G-E controller to a specific task, following the recommendations of G-E specialists in electric drive, and you have G-E Motorized Power. Built in or otherwise connected to all types of industrial machines, G-E Motorized Power provides lasting assurance that you have purchased the best.

Motorized Power
–fitted to every need

GENERAL

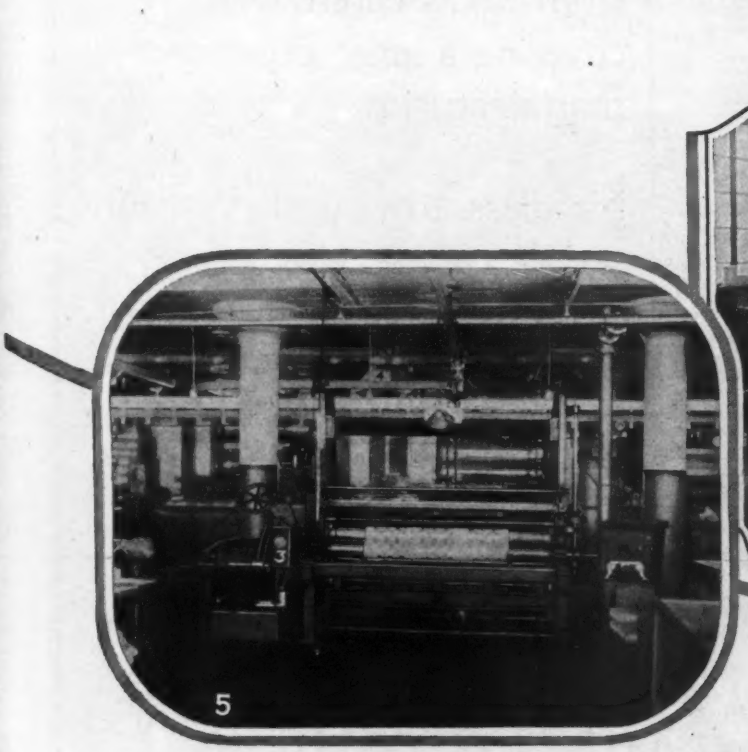
GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y.

equipped with G-E Motorized Power

Here is the finishing room of the Kalamazoo Vegetable Parchment Company—equipped with G-E Motorized Power.

Gone is the jungle of shafts and belts, abolished is the inefficiency of huge line-shaft friction loads. Good lighting, cleanliness, quietness, efficiency, and order prevail. Cutters, trimmers, lay boys, rulers, and waxers are all operated by individual drives—with resultant high efficiency and low maintenance. And the famous reliability of G-E Motorized Power is translated into greater and more continuous production.

Let your nearest G-E office serve you in meeting your every electrical requirement—not only for the finishing processes but for every phase of paper manufacture.



5. *Waxing machine, operated by a 10-h.p. direct-current motor and manual control. There are three other G-E operated and controlled waxing machines in the finishing room.*

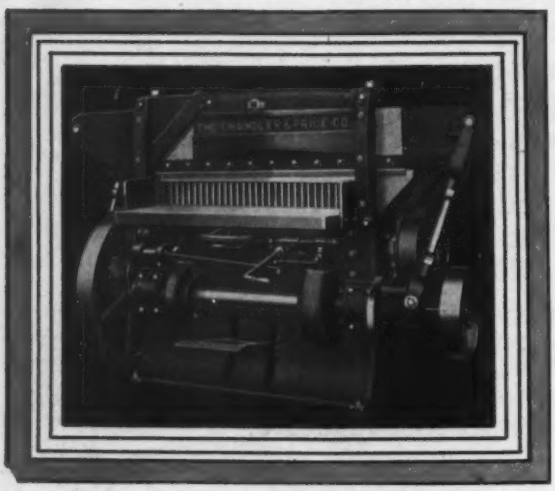
6. *One of the four G-E push-button controlled rulers.*

231-8

ELECTRIC

SALES OFFICES IN PRINCIPAL CITIES

The C & P "Automatic" Cutter Eliminates Vibration



The C & P "Automatic" is really automatic. A quick twist and pull-up on the control lever—one movement of the operator's hand—releases the binder, which forces out the air, settles the pack, and holds it rigidly. The knife follows through at once with a true, straight cut. Binder and knife lift instantly and the knife is held against repeating. The whole operation takes less than three seconds.

THE C & P Automatic Cutter has a fly-wheel supported between ample bearings inside the base. Smooth running and long life are thus assured. Vibration, a deadly enemy of accurate cutting, is done away with.

Besides this great advantage, the C & P "Automatic" offers these features:

1. Convenient, centrally-located control. Other outstanding conveniences, too.
2. Patented knife action. Massive knife bar *pulled*, not pushed, through stock. No chatter.
3. Controlling mechanism with safety pin, requiring 2-way movement of lever to release binder and knife.
4. Heavy, oversize, powerful brake, easily adjusted, very accessible. Specially prepared lining.

May we give you the rest of the C & P "Automatic" story?

Chandler & Price
PAPER CUTTERS & PRESSES

The **CHANDLER & PRICE CO.**, *Cleveland, U.S.A.*

EXHIBITOR
GRAPHIC ARTS EXPOSITION
New York *Sept. 5-17, 1927*

ORR ENDLESS FELTS

The Orr felts are recognized as most important factors in the production of more and better paper at a lower cost per ton.

These felts are manufactured from wools carefully selected, covering a large experience in manufacturing.

Needless to say they insure satisfactory service.

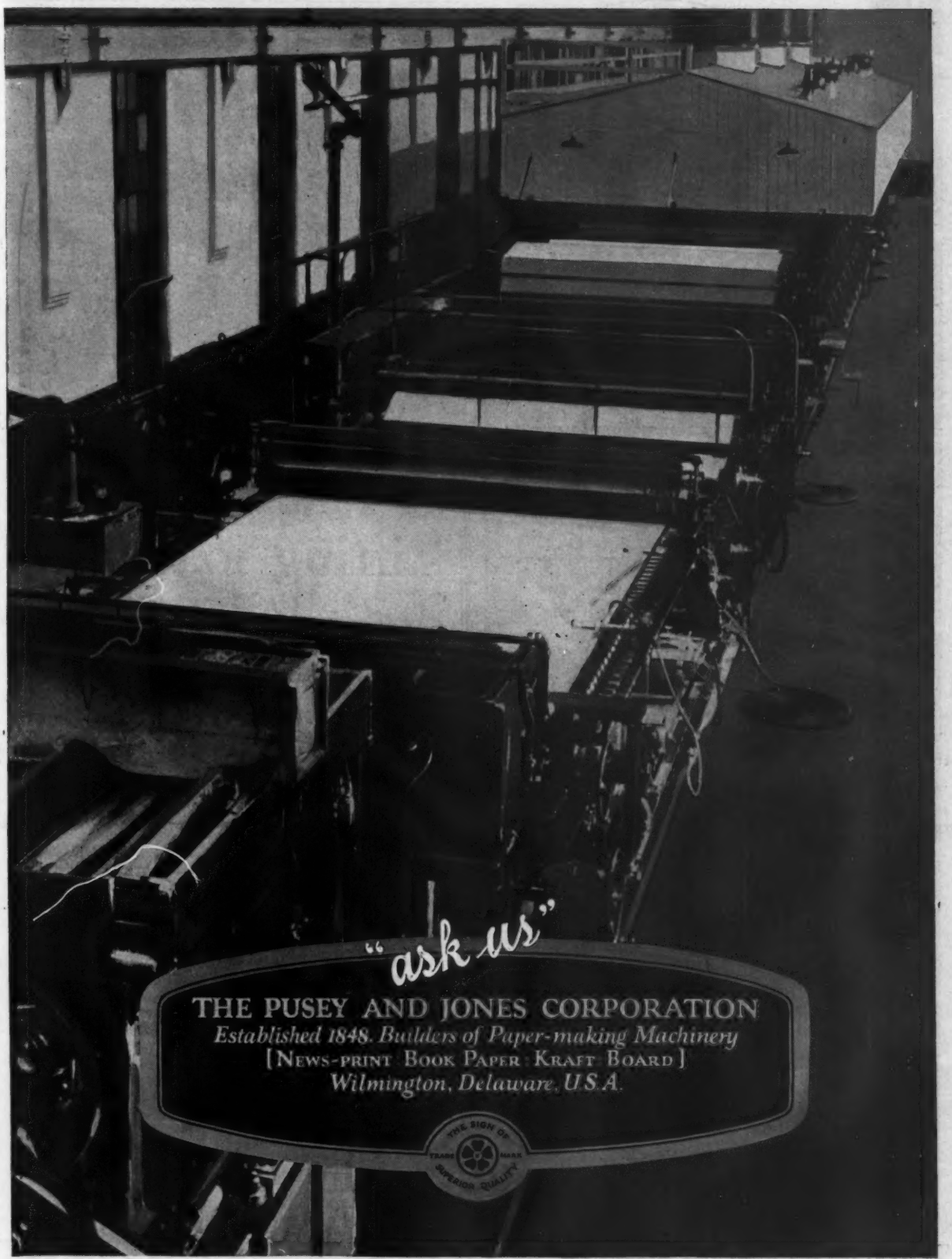
It is possible to weave these felts Endless up to eighty-six feet.

We request a trial, which will prove to your advantage.

Samples of grades required sent upon request.

The ORR FELT & BLANKET COMPANY

Piqua Ohio


"ask us"
THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-making Machinery
[NEWS-PRINT BOOK PAPER KRAFT BOARD]
Wilmington, Delaware, U.S.A.
THE SIGN OF TRADE MARK SUPERIOR QUALITY

Illustrating the 160-inch Book Paper Machine designed and built by The Pusey and Jones Corporation for The Mead Pulp and Paper Company, Chillicothe, Ohio . . . This is the third Puseyjones Machine built for this company and is one of four Puseyjones Book Paper Machines built in 1926.

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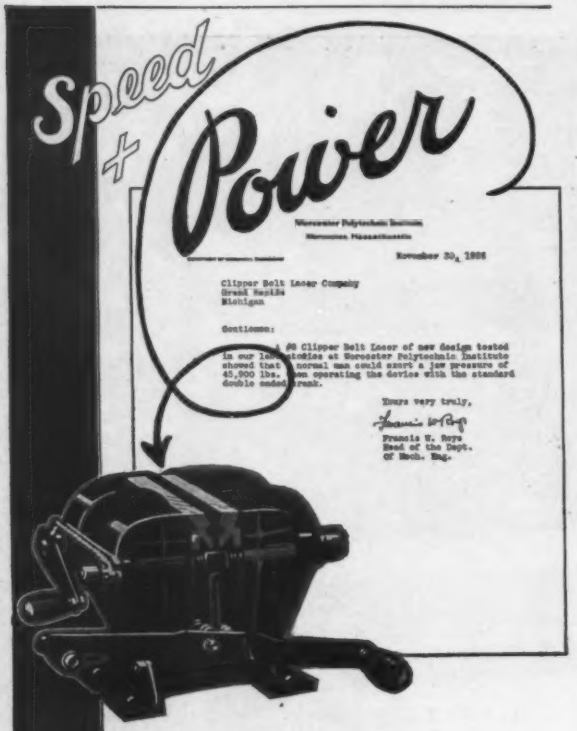
Speed + Power


Worcester Polytechnic Institute
Worcester, Massachusetts

November 30, 1926

Clipper Belt Lacer Company
Grand Rapids
Michigan

Gentlemen:

A #8 Clipper Belt Lacer of new design tested in our laboratories at Worcester Polytechnic Institute showed that a normal man could exert a jaw pressure of 45,900 lbs. when operating the device with the standard double ended crank.

Yours very truly,

Francis W. Hoyt
Head of the Dept.
of Mech. Eng.

45,900 pounds pressure, the weight of six bull elephants, embeds Clipper Belt Hooks absolutely flush with the belt surface.

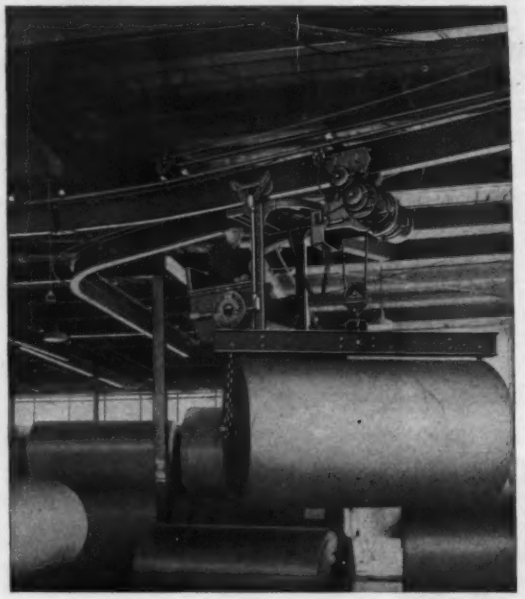
The New Clipper No. 8 SPEED Lacer laces both ends of any belt up to 8 inches in width in 1½ minutes.

One man operates it easily. These three dominant features — POWER, SPEED, EASE OF OPERATION— place the new Clipper No. 8 SPEED Lacer in a class by itself.

Clipper products satisfy any belt lacing requirement.

Clipper Belt Lacer Company
GRAND RAPIDS MICHIGAN

Clipper
No 8 Speed Lacer



Lifting loads to lower costs

Shepard's "Aerial Railway" enables one man to do the work of a gang—to do it quicker and with the precision that makes for top notch production.

This "Aerial Railway" consists of a Shepard cage operated electric hoist, operating on a Shepard Transfer Crane and monorail track with suitable switches.

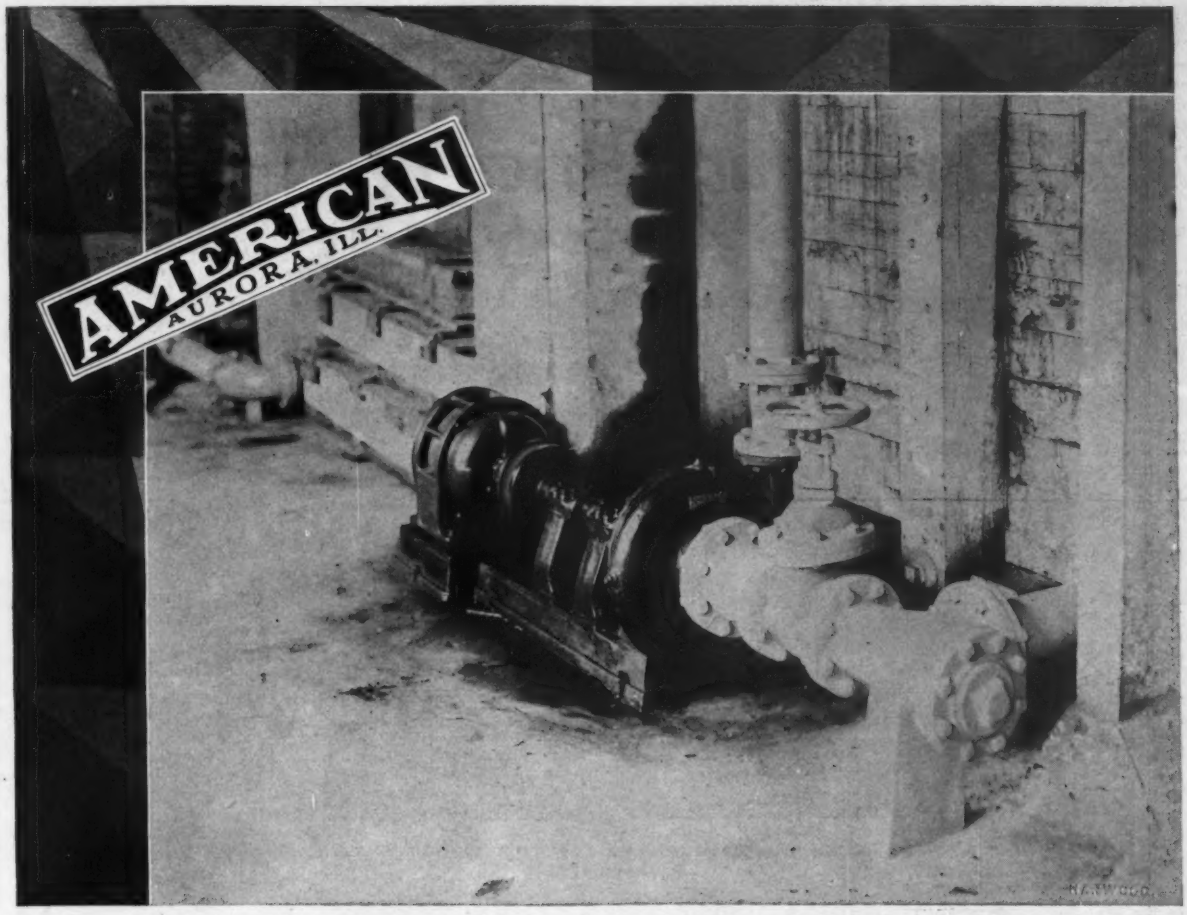
A tightly sealed hoisting unit, balanced gear drive, automatic oil bath lubrication and permanent alignment are some of the Shepard features that assure consistent operation at all times.

Let us tell you more about this labor and time saving material handling method.

Write for our descriptive bulletin, Shepard "Aerial Railway of Industry."

SHEPARD ELECTRIC CRANE & HOIST CO.
378 Schuyler Avenue,
Montour Falls, N. Y.
Branches in principal cities.
Largest Manufacturers of Electric Hoists in America

SHEPARD
ELECTRIC CRANES & HOISTS



"American" Pumps in Wisconsin Paper Mills

District Sales Agencies:

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PICTURED is an "American" single stage pump handling pulp in a Wisconsin paper mill.

"American" Centrifugal Pumps are made in a number of types, particularly applicable to the handling of semi-solid, heavy, saline or acid solutions.

The non-clogging "American" Centrifugal Pumps are proving unusually efficacious for handling heavy pulp solutions in many mills.

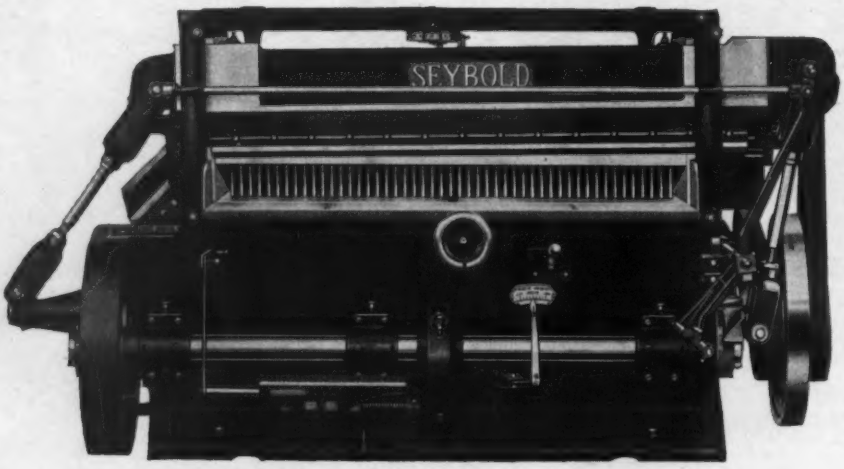
Where clear water is an industrial problem, "American" Deep Well Pumps, of either plunger or turbine type are often the answer.

"American" engineers, experienced in the handling of industrial water problems, are available for consultation without any obligation.

THE AMERICAN WELL WORKS

General Offices AURORA, ILLINOIS *and Factory*

The Dual Price of PROGRESS



Seybold Automatic Cutters. Sizes 40, 44, 50, 56, 64, 74 and 84 inch.

THE price of progress in your cutting department may seem to be large, yet it may be very small.

At first thought, it seems large when you think of replacing present equipment which appears to be good enough.

Yet, this price is very small when reckoned in terms of the service you may expect from your new machines.

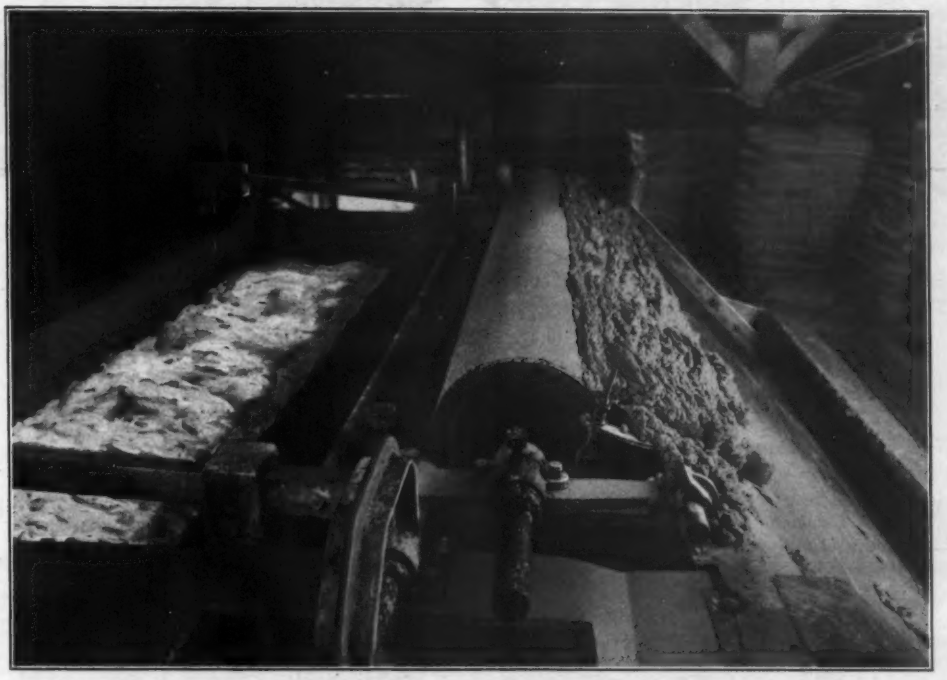
The progressive concern keeps its machinery up to date. It delivers sheets which are accurately cut—turns out a greater volume of work—and does it more promptly—than competitors handicapped with slow machines. The price paid for modern equipment is always justified from an economic standpoint.

It is economical to install new, modern Seybold Paper Cutters. Ask for definite reasons. Address inquiries to:

HARRIS-SEYBOLD-POTTER COMPANY
Seybold Machine Company Division, Dayton, Ohio

HARRIS · SEYBOLD · POTTER

KILLING TWO BIRDS WITH ONE STONE



This OLIVER Combination Ground Wood Decker and News Machine Save-All delivers twenty-eight tons Ground Wood per day, taking feed at 0.40 density.

and

Recovers 3,300 lb. air dry stock daily from White-Water previously sent to the sewer.

If you have two "birds" of this description in your mill why let one of them get away entirely or why take two shots when an OLIVER will get them both at once?

Oliver Continuous Filter Co.

San Francisco
801 Cunard Bldg.

New York
1546 Aeolian Bldg.

London
11 Southampton Row, W. C. 1

Oakland, Calif.
4th & Madison Sts.

Johannesburg, So. Africa
E. L. Bateman, The Corner House

Honolulu, T. H.
W. A. Ramsay, Ltd.

IN ALMOST every plant may be found a unit or a group of machines that constitutes a lubricating problem. You may have such a problem. It may be in the power plant, in the shafts and drives by which power is transmitted, or elsewhere. The operator in charge may be an expert in his line, yet he can hardly be expected to have the necessary time to solve difficult lubricating problems.

To assist you in such problems, the Standard Oil Company (Indiana) maintains a staff of lubricating engineers, who are being called more and more to consult with progressive concerns.

These men are competent and willing to make a survey of your plant, as they are doing in hundreds of others, and submit a report with recommendations for securing lower operating costs through correct lubrication.

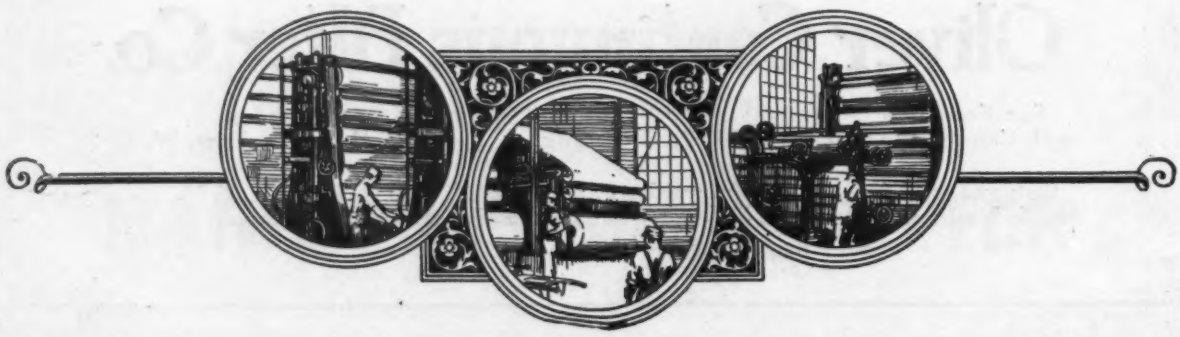
A phone call or letter directed to our nearest branch will bring you one of these lubrication engineers.

With Standard Oils and Greases Goes Standard Oil Service

The Standard Oil Company (Indiana) has branch offices and warehouses in practically every town in the ten midwestern states which comprise its territory. These warehouses serve as distributing points for you and carry your supplies of oil and grease in stock. Our trucks deliver the lubricants in iron barrels to your shops as they are needed, and pick up the empties without extra charge. As there is a Standard Oil warehouse in your town or near enough to it to give you delivery service, it is necessary for you to have on hand only enough lubricants to keep you going from week to week, thus effecting for you many important economies in handling, storage space and insurance.

STANDARD OIL COMPANY
(Indiana)

910 South Michigan Avenue Chicago, Illinois



THERE ARE CONVENIENT WAREHOUSE STOCKS NEAR YOU

Diamond Shipping Facilities are Unsurpassed

ALKALI

THE Diamond Plant being centrally and directly served by three trunk lines, quick shipments over the shortest possible route can always be made.

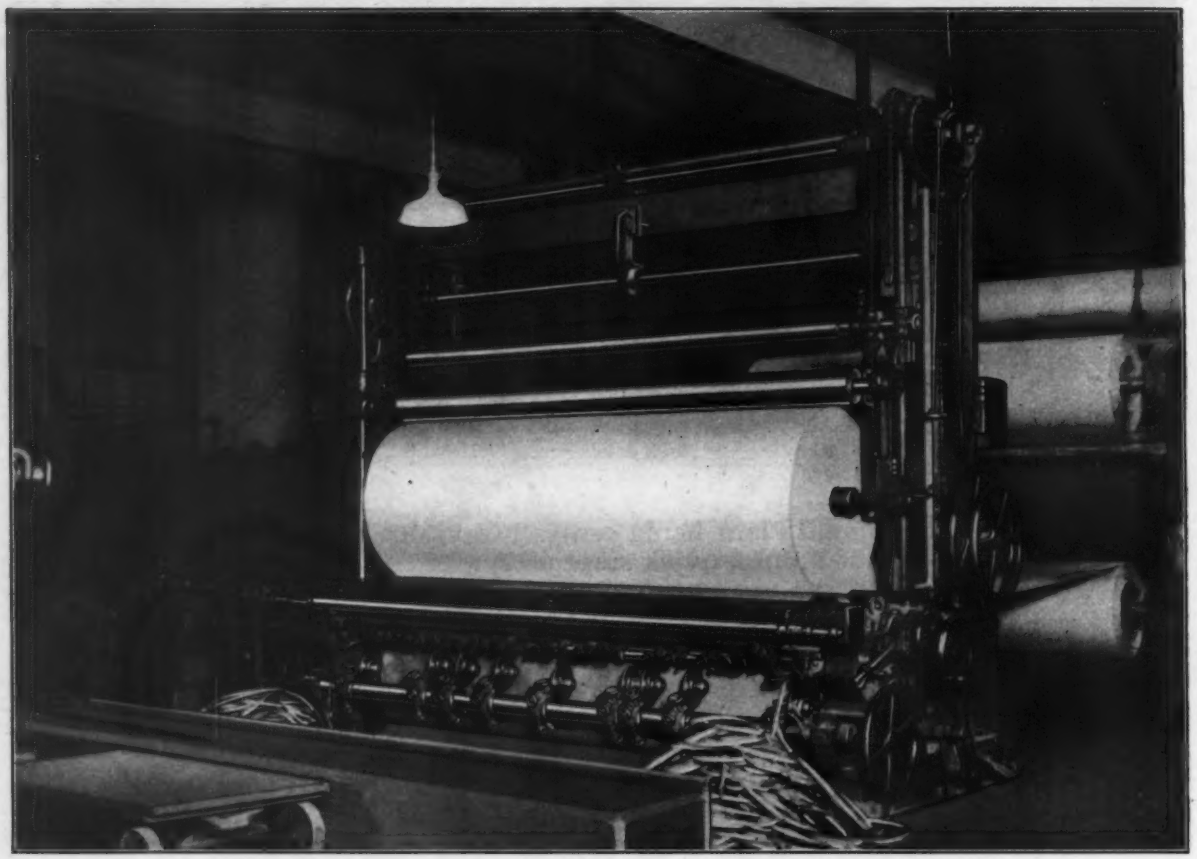
Warehouse stocks for the convenience of less than carload buyers are available in all of the larger cities,—thus assuring a double quick delivery service of Diamond Quality Alkalies in any emergency.

DIAMOND ALKALI COMPANY · PITTSBURGH, PENNA.

SIMPLICITY · DURABILITY · ECONOMY

MAKE MORE PAPER
Make It Better
with the
BROUGHTON SYSTEM
Speeds Up Production—*Write for details and list of users.* HEALY-RUFF Co., St. Paul, Minn.

"LET NATURE DO IT"



120 inch Langston Winder equipped with Waterbury Hydraulic Transmission at the end of board machine in the New London mill of Robert Gair Company.

Making the kind of rolls that converters want

Langston Slitters are built in a wide range of types and sizes as follows:

Type "A"
30" to 72"

Type "BA"
62" to 92"

Type "CA"
62" to 122"

Type "DA"
82" to 165"

and wider

Rolls for converting must be tight and of uniform density. There is no trouble about making rolls of that kind on a Langston Slitter. With the Langston winding principle you can wind a roll that is tight from the first wrap, and the desired tightness can be maintained up to the maximum diameter, which means uniform density.

That is one reason why Langston Slitters are at work in so many board mills.

Langston Slitters are extensively used by converters themselves and by mills that sell rolls to converters—for corrugating, for making fibre board on a paster, and for other purposes.

The Langston Slitter shown above is in the New London mill of Robert Gair Company. They have also another Langston Slitter in the same plant, and four machines at other mills—making six Langston Slitters in all.

SAMUEL M. LANGSTON COMPANY,
Camden, New Jersey

Herman Goettsch, K'otzsche-Dresden, Germany.

Toronto Type Foundry Co., Ltd., Toronto, Canada

T. W. & C. B. Sheridan Co., Ltd., London, E. C. 1.

A. H. COX & COMPANY, INC., Seattle, Washington.

CLEAN SHEAR CUT CUT

LANGSTON SLITTERS

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SIXTH YEAR

Published Every Thursday by the

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View of New Style Palmer-Bee Reducer taken from slow speed end.

The Evidence is Conclusive

No product, without possessing genuine merit, could possibly have attained the wide acceptance that Palmer-Bee Speed Reducers have reached. The weakling is soon found out—particularly when called upon to perform the strenuous jobs that fall to the lot of the speed reducer in paper mill service.

Palmer-Bee Reducers are backed by a long record of satisfaction — time-tried performance in practically every industry that uses power transmission machinery.

The fact that the "World's Largest Producers use P-B Reducers" is unquestionable proof of the satisfaction rendered by these units. Their engineers recommend power transmission equipment only on the basis of KNOWN PERFORMANCE. The presence of Palmer-Bee Reducers in many of the leading plants may be considered as conclusive evidence that Palmer-Bee performance is a KNOWN QUANTITY.

Important new features incorporated into Palmer-Bee Reducers will be of interest to you. Write for Bulletin No. 445.

PALMER-BEE COMPANY
DETROIT - MICHIGAN

"World's Largest Producers Use P-B Reducers"

Improved
Palmer-Bee Speed Reducers

TRADE MILL REG. U.S. P-B MARK TYPE PAT. OFF.

AMERICAN CHINA CLAYS—TEN DAYS ENROUTE TO YOU

YOU CAN SAFELY CARRY SMALL STOCKS

"McNamee Superfine" is our best grade of pulverized clay—No excess moisture—Fine particle size—No grit.

We also manufacture "MNW" grade — pulverized — a "best" clay in everything except color. An economical quality for catalogue, news, etc.

A selected grade of Georgia Washed Clay. No off-colored clay goes to the washing process.

WE ARE NOW HOLDING IN RESERVE STORAGE AT PLANTS OVER 10,000 TONS OF CLAY

R. T. VANDERBILT CO. INC.
50 East 42nd Street
New York

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXV, No. 9 — Thursday, September 1, 1927

Quebec Pulp & Paper Mills Deal Approved

Directors Will Submit Purchase Plan of Price Bros. & Co., and Port Alfred Pulp & Paper Corp. To Shareholders in Near Future—Price for Whole Property, Assets and Liabilities, to Be $3,000,000 in Cash and $7,000,000 of Preferred Stock of New Company, To Be Incorporated

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., August 29, 1927.—Price Bros. & Co. and the Port Alfred Pulp and Paper Corporation have made an offer for the old Chicoutimi Pulp Company's property, now the Quebec Pulp and Paper Mills, Ltd. They have offered to purchase the whole of the property, assets and liabilities, the purchase price to be $3,000,000 in cash and $7,000,000 of the preferred stock of a new company to be incorporated under the laws of the Province of Quebec. The offer has been approved by the directors of the Quebec Pulp and Paper Mills, and will be submitted to shareholders at a meeting to be held in the near future. It is proposed to distribute the purchase price to shareholders as follows:

Distribution of Purchase Price

"1. Each preference shareholder of the Quebec Pulp and Paper Mills, Ltd., upon surrender of each share of $100 par value 7 per cent cumulative, plus 50 per cent accompanying bonus of common stock, shall be entitled to receive at his option

"(a) $40 in cash and $70 of the above preferred stock of the new company, or

"(b) $21 in cash and $100 of the above preferred stock of the new company;

"(c) As regards holders of preferred stock having no accompanying bonus of 50 per cent of common stock they shall be entitled to receive at their option $100 of the above preferred stock of the new company, or $20 in cash and $70 in such preferred stock of the new company.

"Any holder of preferred shares who shall not have notified the company in writing prior to the fifteenth day of December, 1927, of the manner in which he has decided to exercise any option open to him as described above (and also the number of shares in respect of which such option is exercised) shall be entitled to receive in respect of his holdings of preferred shares, one share of the aforesaid preferred stock of the new company, for every share of the preferred stock held by him and shall be deemed to have forfeited any rights to exercise any of the options described above, but such shareholders shall receive in respect of any common shares held by them, the same consideration as the holders of common shares with preferred shares as above provided.

"2. The balance of the consideration to be received from the new company shall be distributed rateably among the holders of common shares which have not been surrendered with preferred shares as above provided.

"Fractional shares of stock shall be adjusted by delivery of fractional scrip in the usual manner."

More Timber Limits Opened

The Quebec Government has decided to offer for lease early in October several blocks of timber limits located on the North Shore of the St. Lawrence and in the Abitibi region. This decision was arrived at following suggestions from limit holders. It was decided, however, that for the present no additional blocks of timber limits would be leased in the Lake St. John district.

Abitibi District Rich in Pulp Wood

In regard to the above decision, it is interesting to note that Hector Authier, who represents the Abitibi district in the Legislature, states that there are millions of cords of superior black spruce pulp wood in Abitibi available to the pulp manufacturers of Quebec, but that up to the present Ontario and the United States have been taking the bulk of that cut.

"For ten years," said Mr. Authier, "the cut of pulp wood has been about 120,000,000 cords a year. Unfortunately, no pulp mill is established in our district, and nearly all of our pulp wood has been sent to Ontario or has gone to the United States mills. Our manufacturers in Quebec, such as those in the St. Lawrence Valley, have had the forest at their doors, so to speak, and it has not been necessary for them to come to Abitibi to get wood. But the wood is here."

Shawinigan Power Co. Expanding

The Shawinigan Water and Power Company, which supplies hydro-electric power for many of the pulp and paper mills of the Province of Quebec, has called a special meeting of the shareholders to authorize the issue of bonds to the extent of $200,000,000 as and when required to meet future needs. The company's present bond issue is limited to $50,000,000, and as this limit is likely to be reached within a few years, it is considered expedient that provision should be made whereby a much larger creation of bonds should be authorized, out of which sufficient bonds would be set aside to retire the presently outstanding bonds of the company as and when the directors may deem such action expedient, and which may prove advantageous to the company. At the present time the directors anticipate only the issuance of additional bonds necessary to meet expenditures for extensions to the plant of the company already in hand.

(Continued on page 76)

Hammermill Paper Co. Agents Meet at Erie

Three Days Conference Is Unusually Well Attended by Representative Paper Merchants From All Sections of the Country—President E. R. Behrend Explains Changes in the Company's Sales and Advertising Departments—Those Who Attended the Meeting

ERIE, Pa., August 29, 1927.—The Hammermill Paper Company's Sixteenth Annual Conference with the agents who merchandise its products was held in Erie, Pa., August 24, 25, and 26. Members of the agents' advisory committee came a day earlier to help outline and plan the work that was to be done at the conference.

E. R. Behrend, president of the Hammermill Paper Co., opened the introductory meeting Wednesday afternoon with an address of welcome. Early in his talk, Mr. Behrend asked his hearers to rise and pay silent tribute to the memory of M. D. McAlpine, Bradner Smith & Co., Chicago; W. N. Russell, Western Newspaper Union, Fort Wayne, and Carroll S. Weir, Hammermill Paper Company, who have passed from the ranks since the meeting of last year.

Mr. Behrend Explains Changes

Mr. Behrend explained the changes that have taken place in the Hammermill sales and advertising departments since last year's conference. He stated that C. W. Chabot, former advertising manager, was now serving as director of distribution in charge of both sales and advertising and that Harrison R. Baldwin was manager of sales as had been announced last November. The new announcement made public was the recent appointment of A. Ellis Frampton as advertising manager.

Norman W. Wilson, vice president of Hammermill, spoke upon the present business situation. Mr. Wilson could see nothing but prosperity ahead for those well enough equipped and well enough managed to earn it.

Plans for Coming Year Outlined

C. W. Chabot, director of distribution, described the plans and effort that were going to be used in the coming year in both sales and advertising work. Mr. Chabot in his new position, holds a distinct advantage in being able to apply his creative and organizing ability to develop and coordinate the work of the two departments. He was followed by Harrison R. Baldwin, manager of sales, and A. Ellis Frampton, advertising manager, who took up the details of the work their respective departments had in prospect.

David Rosenblum, vice president of the Business Training Corporation of New York City, outlined a service now being prepared to follow up the Hammermill course in selling paper.

These speakers concluded the first day's program. The mornings of the following two days were used in discussing the topics that had been outlined and completing the work that had been planned. The afternoons were devoted to outdoor recreation with prizes for the winners of the various sports.

Thursday Winners and Prizes

GOLF

Low Gross—prize, Leather Golf Bag
won by Guy Beckett with score of 81.
Mr. Frank Howe tied this score and also obtained low net. Mr. Howe waived his right to Low Gross and accepted Low Net Prize.

1st Low Net—prize, set of three matched clubs
won by Frank Howe with score of 66.

2nd Low Net—prize, leather overnight bag
won by Mr. Patterson with score of 70.

Kickers Handicap—prize, indoor putting green
won by A. C. Damon with score of 73.
2nd prize—one dozen golf balls
Messrs. T. S. Lathrop, C. C. Walden, Jr., and T. E. Morris tied with score of 74. On draw T. E. Morris won.

Approaching and Putting Contest—prize, canvas golf bag
Mr. Guy Beckett and Mr. E. A. Petrequin tied for first place with score of 9 strokes. As Mr. Beckett already received one major prize, he gave way to Mr. Petrequin.
2nd prize—mashie, niblick and putter

GROUP PHOTOGRAPH TAKEN AT THE SIXTEENTH ANNUAL CONFERENCE

Messrs. B. E. Reeves, W. N Stetson and C. S. Babcock tied with 10 strokes. On draw, Mr. Babcock won.

Putting Contest—prize, Desk Cigarette Case resulted in five ties with 25 strokes. Messrs. Beckett and Petrequin, having already received major prizes, did not participate in the drawing, leaving Messrs. B. E. Reeves, W. N. Stetson and Sidney Jones. Mr. Jones won.

BOWLING ON THE GREEN

First prize—Banjo Clock won by W. A. Rhodes.

Second prize—Thermos Bottle won by David Rosenblum.

QUOITS

First prize—Spartan Chime Horn won by H. S. Wuenschel.

Second prize—Leather Handkerchief Case won by Clyde Kellogg.

Friday Winners and Prizes

Low Gross—prize was a set of matched iron clubs. Mr. W. N. Stetson was the winner with the score 88.

Low Net

First prize—set of 3 matched clubs by G. E. Carpenter, with a score of 69.

Second prize—waterproof golf coat by C. R. Smith with a score of 70.

Mr. Stetson also had a score of 70 but as he had already received one prize he was disqualified.

Kickers Handicap

First prize—golf bag. W. N. Stetson and Mr. M. B. Olmstead tied with a score of 80.

Mr. Olmstead requested Mr. Stetson take the bag.

Second prize—one dozen golf balls, received by Mr. M. B. Olmstead.

Putting Contest

A set of military brushes was given for this prize and was won by B. E. Reeves with a score of 22.

BOWLING ON THE GREEN

First prize—desk clock which was won by Phil P. McHugh.

Second prize—A barometer, by Bryant McQuillan.

QUOITS

First prize—was a swede jacket and was won by L. A. Ramaker.

Second prize—a man's toilet set, by W. E. Dougherty.

Advisory Committee

W. G. Cleveland, E. C. Palmer & Co., Ltd., New Orleans, La.; Frank E. Floyd, Crescent Paper Co., Indianapolis, Ind.; Thos. R. Fort, Jr., Thos. W. Price Co., Philadelphia, 1928.

R. L. Tillman, Beacon Paper Co., St. Louis, Mo.; John D. Swigart, Swigart Paper Co., Chicago, Ill.; W. B. Stevenson, Storrs & Bement Co., Boston, Mass., 1929.

E. C. Mead, Richmond Paper Co., Richmond, Va.; J. Nacht, Union Card & Paper Co., New York, New York; Harold Helmer, Beecher Peck & Lewis, Detroit, Mich., 1930.

Harold Zellerbach, Zellerbach Paper Co., San Francisco, Calif., permanent.

Advertising Committee

J. H. Londergan, Henry Lindenmeyr & Sons, New York City; L. A. Colton, Zellerbach Paper Co., San Francisco, Calif., 1928.

S. T. Jones, Hudson Valley Paper Co., Albany, N. Y.; Richard Bull, Bradner Smith & Co., Chicago, Ill., 1929. *Note*: Mr. Bull was elected to fill the unexpired term caused by the resignation of Harold Helmer.

C. W. Dearden, Rourke Eno Paper Co., Hartford, Conn.; P. A. Stuhlreyer, Diem & Wing Paper Co., Cincinnati, Ohio, 1930.

C. J. Babcock, George Batten Co., New York City; C. W. Chabot, Hammermill Paper Co.

Hammermill Old Guard

1927 CONFERENCE

M. L. Kratz, Alling & Cory Co., Buffalo, N. Y.; A. H. Smith, Alling & Cory Co., Pittsburgh, Pa.; B. E. Reeves, Alling & Cory Co., Rochester, N. Y.; Wm. N. Schaefer, R. P. Andrews, R. P. Andrews Paper Co., Washington, D. C.; R. L. Tillman, Beacon Paper Co., St. Louis, Mo.; Harold Helmer, Beecher, Peck & Lewis, Detroit, Mich.; F. E. Floyd, Crescent Paper Co., Indianapolis, Ind.; P. A. Stuhlreyer, Diem & Wing, Cincinnati, Ohio; J. A. King, Dobler & Mudge, Baltimore, Md.; F. J. Weissinger, Dudley Paper Co., Lansing, Mich.; P. M. Duggan, G. J. Kuebel, J. R. Hauser, Durico Paper Co., Erie, Pa.; E. R. Carpenter,

NTS OF THE HAMMERMILL PAPER CO., HELD AT ERIE, PA., AUGUST 24, 25, 26, 1927

Dwight Bros. Paper Co., Grand Rapids, Mich.; T. H. Epes, Epes-Fitzgerald Paper, Richmond, Va.; Geo. McKinney, F. A. Flinn, Inc., New York City; Fred Stutzman, Holland Paper Co., Inc., Buffalo, N. Y.; J. B. Binley, E. J. Cooper, S. T. Jones, Hudson Valley Paper Co., Albany, N. Y.; R. S. Johnston, Old Dominion Paper Co., Norfolk, Va.; W. G. Cleveland, E. C. Palmer & Co., Ltd., New Orleans, La.; E. A. Petrequin, Petrequin Paper Co., Cleveland, Ohio; Thos. R. Fort, Jr., The Thos. W. Price Co., Philadelphia, Pa.; W. A. Rhodes, S. P. Richards Paper Co., Atlanta, Ga.; E. C. Mead, Richmond Paper Co., Richmond, Va.; Jas. McCracken, A. B. Sherrill, Riegel & Co., Inc., Philadelphia, Pa.; Richard S. Bull, Bradner Smith & Co., Chicago, Ill.; G. R. Likins, Springfield Paper Co., Springfield, Mo.; W. B. Stevenson, Storrs & Bement Co., Boston, Mass.; G. L. Webb, Storrs & Bement Co., New Haven, Conn.; John Swigart, Swigart Paper Co., Chicago, Ill.; J. D. Keating, Troy Paper Corp., Troy, N. Y.; J. Nacht, Union Card & Paper Co., New York City; A. C. Damon, Paul E. Vernon & Co., New York City; Geo. W. Ward, D. L. Ward Co., Philadelphia, Pa.; C. J. Babcock, George Batten Co., New York City; Wm. H. Howe, Wm. H. Howe, Buffalo, N. Y.; W. E. Sayle, National Env. Co., Div., Waukegan, Ill.; E. V. Johnson, United States Env. Co., Springfield, Mass.; C. C. Walden, Jr., Walden, Sons & Mott, Inc., New York City.

Actual Registrations of 1927 Agents Conference

F. D. Keating, Troy Paper Corporation, Troy, N. Y.; Calvin Wilson, R. D. Wilson Sons & Co., Clarksburg, W. Va.; Alan Chandler, The Alling & Cory Co., Pittsburgh, Pa.; Guy H. Beckett, Western Newspaper Union, Fort Wayne, Ind.; A. H. Smith, The Alling & Cory Co., Pittsburgh, Pa.; Harold Helmer, Beecher, Peck & Lewis, Detroit, Mich.; Thos. R. Fort, Jr., The Thos. W. Price Co., Philadelphia, Pa.; F. C. Stratford, Zellerbach Paper Co., San Francisco, Cal.; J. B. Jones, Western Paper Co., Omaha, Nebr.; T. E. Morris, National Envelope Co., Waukegan, Ill.; W. H. Stuart, Henry Lindenmeyr & Sons, New York, N. Y.; W. B. Stevenson, Storrs & Bement Co., Boston, Mass.; G. L. Webb, Storrs & Bement Co., New Haven, Conn.; C. C. Walden, Jr., Walden Sons & Mott, New York, N. Y.; H. W. Vernon, Paul E. Vernon & Co., New York, N. Y.; W. E. Sayle, National Envelope Co., Waukegan, Ill.; W. G. Cleveland, E. C. Palmer & Co., Ltd., New Orleans, La.; James McCracken, Riegel & Co., Inc., Philadelphia, Pa.; Birkett Knox, Swigart Paper Co., Chicago, Ill.; Edward Flesch, The Capital City Paper Co., Springfield, Ill.; E. A. Petrequin, The Petrequin Paper Co., Cleveland, Ohio; Max Greenebaum, Beckman Paper & Card Co., New York, N. Y.; R. S. Johnston, The Old Dominion Paper Co., Norfolk, Va.; E. C. Mead, Richmond Paper Co., Inc., Richmond, Va.; T. H. Epes, Epes-Fitzgerald Paper Co., Richmond, Va.; E. V. Johnson, United States Envelope Inc., Div., Springfield, Mass.; J. A. Carpenter, Kansas City Paper House, Kansas City, Mo.; E. L. Leach, Kansas City Paper House, Oklahoma City, Okla.; A. D. Tayloe, Tayloe Paper Co., Memphis, Tenn.; C. M. Bleke, Mach-Elliott Paper Co., St. Louis, Mo.; Max Kiesewetter, Antietam Paper Co., Inc., Hagerstown, Md.; F. J. Weissinger, The Dudley Paper Co., Lansing, Mich.; J. R. Hauser, Durico Paper Co., Erie, Pa.; G. J. Kuebel, Durico Paper Co., Erie, Pa.; H. S. Wuenschel, Durico Paper Co., Erie, Pa.; G. E. Carpenter, Carpenter Paper Co., Omaha, Nebr.; T. A. Ramaker, The E. A. Bouer Co., Milwaukee, Wis.; P. M. Duggan, Durico Paper Co., Erie, Pa.; C. W. Dau, Carpenter Paper Co. of Iowa, Des Moines, Iowa; B. E. Reeves, The Alling & Cory Co., Rochester, N. Y.; R. S. Bull, Bradner Smith & Co., Chicago, Ill.; S. T. Jones, Hudson Valley Paper Co., Albany, N. Y.; J. B. Binley, Hudson Valley Paper Co., Albany, N. Y.; E. J. Cooper, Hudson Valley Paper Co., Albany, N. Y.; E. R. Carpenter, Dwight Bros. Paper Co., Grand Rapids, Mich.; Albert Wittler, Irwin Paper Co., Quincy, Ill.; C. J. Babcock, George Batten Co., New York, N. Y.; W. E. Palmer, George Batten Co., New York, N. Y.; Anthony Ascherl, George Batten Co., New York, N. Y.; Ladson Butler, Business Training Corp., New York, N. Y.; J. P. Cunningham, Bradner Smith and Co., Chicago, Ill.; H. G. Keffer, Johnston Paper Co., Harrisburg, Pa.; Fred Stuszman, Holland Paper Co., Buffalo, N. Y.; W. R. Grazelle, Holland Paper Co., Buffalo, N. Y.; C. Raymond Smith. Van Reed Paper Co., Reading, Pa.; A. W. Leslie, The John Leslie Paper Co., Minneapolis, Minn.; G. R. Likins, Springfield Paper Co., Springfield, Mo.; R. E. Cashoin, Caskie-Dillard Co., Inc., Charlotte, N. C.; A. S. Gow, Curtis Publishing Co., Philadelphia, Pa.; Mason Olmsted, Zellerbach Paper Co., San Francisco, Cal.; Z. D. Millidge, Western Newspaper Union, Omaha, Nebr.; J. A. King, Dobler & Mudge, Baltimore, Md.; Simon Walter, Andrews Paper House, York, Pa., and Philadelphia, Pa.; A. B. Sherrill, Riegel and Co., Inc., Philadelphia, Pa.; W. A. Rhodes, S. P. Richards Paper Co., Atlanta, Ga.; T. S. Lathrop, Lathrop Paper Co., Inc., New York, N. Y.; F. E. Floyd, Crescent Paper Co., Indianapolis, Ind.; Geo. McKinney, F. A. Flinn, Inc., New York, N. Y.; J. Nacht, Union Card & Paper Co., New York, N. Y.; A. C. Damon, Paul E. Vernon and Co., New York, N. Y.; R. L. Allison, United States Envelope Div., Springfield, Mass.; F. B. Korbel, P. P. Kellogg and Co., Div., Springfield, Mass.; G. W. Gould, Swigart Paper Co., Chicago, Ill.; W. N. Stetson, Jr., Storrs & Bement Co., Boston, Mass.; Bryant McQuillen, Storrs & Bement Co., Boston, Mass.; David Rosenblum, Business Training Corp., New York, N. Y.; M. L. Kratz, The Alling & Cory Co., Buffalo, N. Y.; W. E. Dougherty, Central Topeka Paper Co., Topeka, Kan.; W. M. Schaefer, R. P. Andrews Paper Co., Washington, D. C.; Clyde Kellogg, R. P. Andrews Paper Co., Washington, D. C.; P. A. Stuhlreyer, The Diem & Wing Paper Co., Cincinnati, Ohio; Edw. Joos, Jr., The Diem & Wing Paper Co., Birmingham, Ala.; W. H. Rourke, The Rourke-Eno Paper Co., Hartford, Conn.; P. P. McHugh, Megargee Bros., Scranton, Pa.; G. G. Herrmann, E. A. Bouer Co., Milwaukee, Wis.; W. E. Thornton, Caskie-Dillard Co., Inc., Lynchburg, Va.; G. W. Ward, D. L. Ward Co., Philadelphia, Pa.; F. L. Fisher, Central States Envelope Co., Div., Indianapolis, Ind.; R. P. Andrews, R. P. Andrews Paper Co., Washington, D. C.; John Swigart, Swigart Paper Co., Chicago, Ill.; N. J. Patterson, P. P. Kellogg & Co., Div., Springfield, Mass.; R. L. Tillman, Beacon Paper Co., St. Louis, Mo.; A. E. Pratt, Carter, Rice & Co., Boston, Mass.; W. H. Howe, W. H. Howe Co., Buffalo, N. Y.; F. W. Howe, W. H. Howe Co., Buffalo, N. Y.; D. C. McIntosh, American Paper Exports, Inc., New York, N. Y.; A. Levin, American Paper Exports, Inc., Mexico City; T. J. Keenan, The Paper Industry, New York, N. Y.; Harry Alling, Arnold-Roberts Co., New Haven, Conn.

Big Quantities of Paper for Cable

170,000,000 pounds of paper, lead and copper are used yearly in one plant alone to produce telephone cable required for the Bell Telephone System.

This cable is manufactured in two plants—one at Kearney, New Jersey and the other at Hawthorne, Illinois. Cable stranding machines at the Hawthorne plant have a capacity of 590 reels of wire and produce over 50 linear feet of cable per minute. To insulate the wires in the cable requires 6,000 tons of paper of twenty-three sizes and five different colors.

In March, 1926, a record month, the total output was nearly 4 billion feet of wire.

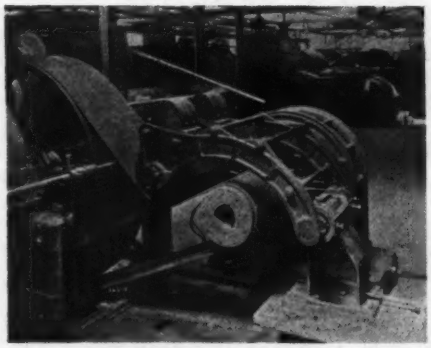
Growing Demand for Waxed Paper

[FROM OUR REGULAR CORRESPONDENT]

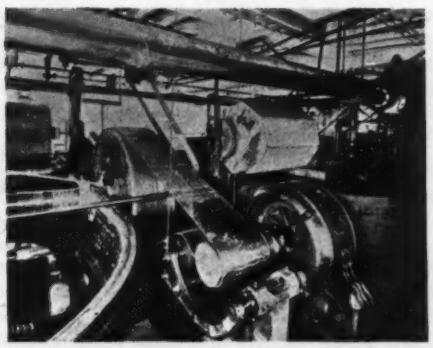
SPRINGFIELD, Mass., August 30, 1927.—The increasing number of uses to which waxed paper is being put has greatly increased the sales of the Package Paper & Supply Company of Brightwood which will have to expand before long to keep pace with its increasing business. Its sales now total over $1,000,000 yearly. Its products go to such far away places as New Zealand, South America, South Africa, the Philippines and the Near East.

Pulmax Drives operating with a double-headed motor, one a 75 H. P. beater drive and one a 50 H. P. washer drive.

Pulmax Beater Drives



100 H. P. Pulmax Drive operating a beater on 6 ft. pulley centers.



Pulmax Beater Drive operating with belt tight side top.

Mills that have their beater rooms completely equipped with Pulmax Drives are effecting substantial savings in floor space, cost of motors, belting and power. Their lay-outs have been tremendously simplified and improved.

Ask us to show you what others have done and what you can do by standardizing on Pulmax Beater Drives.

Bird Machine Company
SOUTH WALPOLE MASSACHUSETTS

Try One Pulmax Drive

1165

Demand for Paper Improving in Philadelphia

Inquiries of Broader Scope Being Received by Some Local Distributors—Board Mills Nearing Capacity Operations—Glassines, Builders Boards and Corrugated Containers in Heavy Request—Offerings of Paper Stock Limited

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., August 29, 1927.—Though the paper trade is not keeping pace with the normal seasonal activity usually experienced at this time in preparation for the resumption of Fall business after the vacation months have passed there has been a slightly increased interest in the various lines of both fine and coarse supplies in the past week. While business lags along awaiting the return of prospective buyers from summer holiday vacations a few of the dealers are now receiving inquiries of broader scope. Despite the uncertainty of the future the paper market holds steadily to the prices that have been maintained throughout the past six months.

Mills More Lively

Mills are reported to be more active, with orders increasing as the summer months wane. However, this large growth of business is confined chiefly to specialties, such as glassines, builders boards, and corrugated containers, rather than to the paper products included in the general list. Glassines are reported to be in heavier demand than at this season in the past two years. Board mills are nearing capacity operation, with those plants devoted to builders boards of the compo-grades oversold on their specialties.

Southern Kraft Mills Sold Ahead

With Philadelphia markets featuring large quantities of southern made kraft, the steady market experienced for these papers is of timely interest. Despite the handicaps experienced by the Mississippi floods that prevailed last Spring, the mills have been able to maintain a steady basis of operation throughout the subsequent weeks of the summer. Dealers have been informed that orders are well maintained and that the popularity of southern made kraft has made it necessary to broaden the tonnage to be supplied for Fall stocking. Prices are steady and holding firmly to the higher quotations of last year.

Paper Stock Very Scarce

The supply of the lower grades of paper stock in the warehouses of the wholesale paper stock dealers is fast dwindling under the heavier demand which set in within the past fornight. As the mills become more active, dealers in the cheaper grades of paper stock are experiencing difficulty in meeting the needs of the manufacturers. The prices of the cheaper grades have been so low that collectors of old papers are not now active in gathering waste stocks, because of their unprofitable values. The result is that a scarcity has followed the advancing market and prices have begun to rise in proportion to the supply and demand laws that now regulate the raw material market. The better grades that have been firmly held at the higher quotations are also popular with the mills just now, but are not as active as the lower priced and more generally used paper stocks. All the lower grades have advanced from 15 to 25 per cent. The rag market continues to be a listless drifting affair.

Coarse Papers Slightly Improved

Coarse papers have shown a very slight improvement. This betterment extends to wrappings, paper boards, bags, corrugated products, and like specialties consumed by the mercantile trades and allied converting industries. Builders supplies have shown signs of slumping. Cooler weather has created a slower market for hot weather specialties usually active as this season.

Lang Paper Company Buys Ship Plant

The former ship building plant of the Pusey and Jones Company, located at Gloucester, N. J., has been purchased by the Lang Paper Company, now located at 24th street and Callowhill. The present site of the Lang Paper Company has been condemned by the City of Philadelphia as part of the property which will be converted into the Parkway. The Lang Mills are devoted to the manufacture of roofing and felt papers and are one of the largest independent roofing producers in this section. The new location has been acquired in anticipation of notice of the city authorities to vacate the present home within the year. The Gloucester plant of the Pusey and Jones Company was used by the paper machinery manufacturing concern now located at Wilmington, Del., as a branch of its ship building machinery manufacturing business during and before the war. The Lang Company will convert the building on the site into a paper plant and will have it completed in time for the removal of its present home under notice by the muncipality.

Court Upholds Insurance Indemnity For Keystone Mills

Under decision handed down by the Pennsylvania Supreme Court, the Lindsay Paper Company and Allen Lindsay, owners of the Keystone Paper Mills, are to receive the full amount of insurance covered under claims for the destruction of the buidlings and in five local companies involved in the insurance litigation, which has been pending ever since the fire three years ago. There are fifteen fire insurance companies involved in the disputed claims, amounting to $250,000. The five local companies protested the payment of $110,000 involved for damages to the mills and the case was taken to Court, the Lindsay Company and the Keystone Mills, former owner Allan Lindsay, being awarded this amount by the Delaware County Courts about a year ago. The fire insurance companies represented in the local group appealed the case to the Supreme tribunal. Last week the State Supreme Court affirmed the decision of the lower courts and sustained the award to the Keystone Mills owners. The other ten insurance companies are appealing to the United States Court as foreign concerns not incorporated under the State laws of Pennsylvania, and settlement is still pending. The Keystone Mills were more than a century old at the time of their destruction by fire. Since the fire the property on which they were erected at 69th street and Darby has been sold to the P. R. T. as a terminal site.

Garret-Buchanan Assumes Control of Park-Weikert

Having taken over the controlling interest of the Park-Weikert Company, which is located in the rear of its building at 16-20 South 6th street, the Garret-Buchanan Company has changed the title to that of its own company, to be known as the cordage and twine department of the new owners. It will continue the business of cord and twine dealers at the south Marshall street address of the Parke-Weikert Company.

Ajax Paper Mills Wins Chicago Suit

An interesting decision in favor of the Ajax Papers Mills, Inc., of Buck Run, Pa., is of nation wide interest to the trade as it affects the rights of a concern incorporated in another state other than the one in which it is conducting business. As a Pennsylvania Corporation the Ajax Paper Mills entered suit against William T. Smith, a paper sales agent of Chiacgo, Ill., who sold toilet paper manufactured by the Keystone State paper concern at its Buck Run Mills, amounting to $2,121.87, which was delivered to the Chicago defendant, according to his own testimony, without complaint that the merchandise was not delivered in strict compliance with terms of the contract of purchase. His testimony on the witness stand was that he had received and sold the toilet

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are treated by PATENTED chemical processes TO COUNTERACT the deteriorating effects of water, alkali and acid. This treatment results in a LONGER MAINTENANCE of the natural elasticity and resilience of the wool fibre — BETTER RUNNING PERFORMANCE — HIGHER WATER REMOVAL and QUICKER FUNCTIONING.

An explanation of this tanning treatment and its results has been issued in

KENWOOD BULLETIN No. 29

A reprint of this bulletin will be mailed on request

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paper, but had not paid for the goods, his only defense being to uphold his rights to not pay for the merchandise on the grounds that the Ajax Paper Mills was a foreign corporation incorporated under the laws of Pennsylvania and not those of the State of Illinois. The defense claimed that the Ajax Mills was organized to engage in the manufacture and sale of paper products and had its principal offices and place of business in Chicago and that as such a corporation it had at no time and did not have at the time of the starting of the suit, a certificate of authority, permit or license to do business in the State of Illinois. It was stated by the defense that this fact made all contracts in the state of Illinois illegal and void.

In the decision rendered a few days ago, following two years of litigations, in the Chicago Courts by Judge Jonas of the Municipal Court, the victory of the Ajax Mills was based upon a prior decision by Federal Judge Grosscup, of the Circuit Court of Appeals at Chicago in similar contest of a foreign corporation with a Chicago sales agent in the case of the Dixie Cotton Felt Matress Company, vs. Stearns, in which it was proved that the appellee's business house was at Cincinnatti and that it had warehouses all over the country, including Chicago, which was being advertised as a "sales room." Attorneys for the Ajax Company gave exerpts from his case showing that there was nothing in this proof that excluded the fact that all the sales made by the appellee may have been made from Cincinnatti, the warehouse in Chicago being used simply as a place from which to make deliveries, and as long as that fact is not excluded by the party on whom rests the burden of proof, it must be accepted as one of the facts to which the proposition as law is applied.

The trial judge placed upon the defendant the burden of proving his plea and for this reason called 21 witnesses, many of them paper men in the Chicago trade, to testify. H. Smith endeavored to show that the Ajax Mill stored paper in the Western Warehousing Company in 1923 and sold some of this paper to customers in Chicago. The Buck Run paper manufacturers proved Arthur Rapp, at that time their Chicago representative, took orders only and sent them to the home offices, which directed deliveries. There were no witnesses for the Ajax Mills, its proof being based upon the cross question of its own attorneys who personally conducted the cross examination and under whose interrogation admissions in favor of the Pennsylvania manufacturers were brought forth. The attorneys brought out the lease of the office was in the name of Rapp and that while the Ajax name was listed in the phone book, Rapp was the subscriber and paid all bills himself out of his own earnings. The Ajax Paper Mills, Inc., were allowed judgment for the full amount of their claims of $2,121.87.

Goldman Purchases Large News Print Tonnage

Having purchased thirty carloads of damaged news print from the recent fire sale of the assets of *The Georgian* newspaper plant, in Atlanta, Ga., the Goldman Paper and Stock Company, 414 South Front street is converting the salvaged paper into serviceable products. In the large converting plant which adjoins the paper warehouses of the Goldman Company there will be converted into sheets and rolls the 700 tons of news print which the company purchased at the fire sale. The large tonnage of paper was brought to Philadelphia last week and is being cut into news print sheets and small roll products used by the trade for wrapping stocks and by the allied industries in the box manufacturing business and advertising and printing branches of the trade. The paper was stored by the newspaper publishers in their warehouses as the time of the fire several weeks ago.

Keikhefer Container Co. Adds New Plant

Under the plans for the expansion of its business the Keikhefer Container Company, with several units now operating at its large plant at Delair, N. J., is now preparing to add to the several buildings already erected on its property. Plans for the addition include a complete finishing mill to supplement that already constructed, which will be erected at a cost of $150,000, inclusive of equipment. There will be installed in the two story building of brick and steel, 120 feet wide by 420 feet long, a complete printing plant, cutters, box riveters and other finishing equipment used in the finishing of container board and containers. The new building will be constructed along the same lines as the structure already erected on the site of the mills and container manufacturing plant at Delair. Through the erection of the new addition the company will be able to considerably increase production.

Interest Increases in Brotherhood Election

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., August 29, 1927.—Jeremiah T. Carey, former president of the International Brotherhood of Papermakers who has been nominated for the office of second vice president, was declared by Matthew Burns, secretary of the union, to be disqualified from running for office at the present time. According to Secretary Burns, former President Carey has failed to pay a bill of costs in connection with the dismissal of an injunction suit three years ago during the bitter controversy when Mr. Carey was fighting Matthew Parker for the presidency of the Brotherhood. Unless this sum is paid before the ballots are printed Mr. Carey's name will be omitted from the list of candidates. The ballots for the fall election will be distributed during the next two weeks.

The contest for president between William R. Smith and Secretary Burns is creating widespread interest and the election promises to be one of the most spirited in years. President Smith was called to Michigan last week to adjust some minor trouble in the mills at Escanaba and it is believed that he will take the opportunity of doing some electioneering in the West.

Next in interest to the contest for president is the fight for the office of treasurer between John Coughlin, of Brooklyn, and Archie Hook, of Chicago, the present incumbent. Mr. Coughlin, however, has been nominated by but one local in Iroquois Falls, Ont.

George J. Schneider, of Appleton, Wis., nominated for delegate to the American Federation of Labor convention, has filed his declination, leaving the field to Matthew A. Burns, President W. R. Smith and Frank P. Barry, who is the unopposed candidate for re-election as first vice president. There is also a contest for delegate to the Dominion Trades Congress between Arthur D'Aoust, of Hull, P. Q., Leslie Johnson, of Iroquois Falls, Ont., and A. F. McLeod, of Espanola.

W. P. Warner, of Raymondville, N. Y., has declined to be a candidate for the office of fourth vice president. Among the other declinations filed at headquarters are those of George Martin, of Manitoba, and Adolph Gauthier, of Niagara Falls, both nominated for fourth vice president.

Forest Products Work In New Zealand

[FROM OUR REGULAR CORRESPONDENT]

MADISON, Wis.,August 29, 1927.—Alex R. Entrican, engineer in forest products of the New Zealand Service, who is at the U. S. Forest Products Laboratory here watching the development of a pulping and paper making technique for a number of New Zealand grown woods, reports that the New Zealand Forest Service maintains a box testing laboratory modeled on the one at Madison. The operation of this department of the New Zealand forest products work has been attended with signal success. In the development of dairy produce containers, for instance, the present New Zealand standard export butter box represents a saving of about 20 per cent in wood and a tenfold increase in strength over the old standard. Much of the laboratory's redesign has involved the use of metal bindings, which must be approved before use in export service.

The Forest Products Laboratory, Madison, Wis., will be Mr. Entrican's headquarters while he is in the United States. He will make a survey of forest industries in this country before returning to New Zealand.

While So Many Talk About It-- We Are Busy DOING It!

You cannot dismiss the subject of Waste like that of Weather with the remark, "something should be done about it." DO SOMETHING—like progressive mills all about you who are now operating or arranging with us for installation of

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Waste heat in vapor from the machine is reclaimed and put to work heating the air supply. The resultant saving of steam with consequent leveling of boiler load peaks quickly shows a substantial decrease in operating costs. Right now we are arranging installations to cut waste this winter in more and more progressive mills. Are you ready to DO SOMETHING to save your money?

To properly design a system for your machine takes time. Consult us now. Be ready when cold weather arrives.

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Paper Business Expanding in Los Angeles

Practically All Sections of Local Market Experience Increased Activity—Shipments of Paper Moving Into Consumption in Large Volume—Outlook for Autumn Trade Considered Highly Promising by Most Observers

[FROM OUR REGULAR CORRESPONDENT]

LOS ANGELES, August 24, 1927.—Rallying from the usual business of the summer, the Los Angeles paper industry is experiencing increased activity in all departments. Although it is predicted that the actual fall stimulus will not be felt until about the first of September, many of the leading paper firms are filling large orders for local printers, and big paper shipments are being made by a number of large concerns. Employees are enjoying their vacation periods, and everything is being placed in readiness for the expected increase in sales early in September.

Blake, Moffit & Towne Going Strong

The Blake, Moffit and Towne Company reports a steady increase in fall orders, and prospects for a banner month in September seem assured from present sales indications. Both Mr. Erlandson, of the fine paper department, and Mr. Van Black, sales manager, assert that recent business of their company will continue throughout the Fall. This company has built its reputation on high grade paper, and because of this fact it has done a volume of business in an excellent grade of paper products.

Paraffine Companies Active

Harvey Brown, of Paraffine Companies, Inc., states that his company has been doing unusually good business over the summer months, and that their recent orders are an indication of great business activity in September. This modern paper plant has a large capacity for output, a force of capable workmen and salesmen, and their paper products are of the finest. Many of the employees now on vacation will have returned by September, at which time, Mr. Brown added, the paper industry in Los Angeles will be greatly stimulated.

Sierra Paper Co.'s Good Record

The Sierra Paper Company points to a splendid sales record for the summer as proof that business has not been dull even during the vacation months. This firm carries one of the most complete paper stocks in the city, their monthly sales are tremendous, and they employ a large staff of skilled office men and salesmen.

Angelus Plants Busy

The Angelus Paper Box Company, with their new plant now in complete operation, has noted a steady growth of sales this month. The cool weather prevailing this summer seems responsible for this condition, and large orders have been filled by the new plant on 61st street, which is engaged solely in the production of corrugated paper containers. The old factory on North Broadway, now used in folding and setting up boxes, has been running at full tilt, with increased output predicted by Mr. Stein, the firm's manager, for the fall months.

American Paper Co. Books Large Orders

The American Paper Company has done very good business this summer, according to manager Goldman, and large orders are already being filled for use in September. The steady increase in local printing plants, and the large business they are doing, make for a steady growth in sales for all local paper concerns. Large real estate subdivisions in and around Los Angeles, extensive development projects, and the large fall sales being held by local merchants.

Autumn Outlook Promising

The much advertised Dole Hawaiian air flight has made possible several large orders for the paper manufacturers, while Southern California's steady growth, the constant influx of tourists, and Los Angeles' housing problem, give further impetus to the paper business. New stocks are being added by various local retail paper firms, general activity in ordering seems prevalent, and the outlook in the paper trade is excellent.

National Paper Products Business Increasing

The National Paper Products Company, now operating in the new plant at Southgate, reports a marked increase in their business since the new change has been made. The Western Pacific Company, located at the National Paper Company's old place, reports a steady increase in their business since moving into their new quarters.

Association Work Effective

Secretary Coffman, of the Paper Trade Association of Southern California, has been actively engaged in recent meetings and association work, all of which will give new impetus to the cooperation of local paper industries. He reports that the business is steadily on the increase, and September bids well to be one of the best ever experienced in this metropolis.

Now Farrel Birmingham Machinery Corp.

ANSONIA, Conn., August 29, 1927.—Notices have been forwarded to the stockholders of the Farrel Foundry and Machine Co., of this city and the Birmingham Iron Foundry of Derby, to the effect that the directors of the companies recommend to their respective stockholders that the two companies be merged and calling for a meeting on September 20, at which the stockholders will be asked to vote on the proposition.

This is in line with the trend of the times and therefore is a logical step for these two companies located so closely together and with lines of manufacture complementary to one another. Modern competition is so keen that progressive manufacturing concerns are finding it necessary to merge their interests in their efforts to effect economies that are vital and necessary to success under modern conditions in the commercial world.

These two concerns have been successful, progressive concerns with honorable careers of between 80 and 100 years and have been closely identified with the progress and welfare of their respective communities.

Both the F. F. & M. Co. and Birmingham Iron Foundry are believed to be the oldest concerns continuously in business in their respective cities and having the longest corporate existence. The Derby concern came into being in 1836 while the F. F. & M. Co. started in business in 1848. Besides its local plant, which is the second largest industry of this city, the F. F. & M. Co. operates a big plant in Buffalo, N. Y. The combined number of employees of the two concerns, which are soon to merge, is over 1,600 and their combined weekly payroll approximates $60,000 or $3,120,000 per year.

Both concerns specialize in heavy machinery such as is used by sugar, rubber, paper and brass and copper industries and have customers the world over. The new concern will do business under the corporate name of the Farrel Birmingham Machinery Corporation and will be incorporated under Connecticut laws.

There will be no important changes in the management of the separate concerns and the present officers of both companies will be active in the new corporation. No radical departure from the conduct of the respective companies' affairs is contemplated and it will be the aim of the new organization to maintain the high standard for their products which have made them world famous.

Greater Hydration

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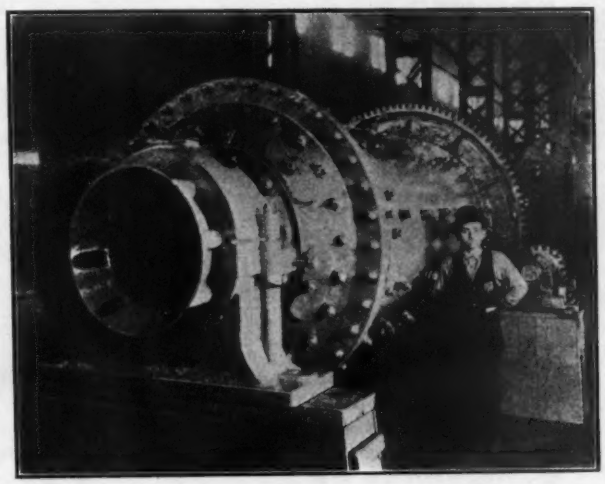

in less time and with less power consumption, and greater hydration gives you better stock. The unique construction of "The Hardinge" has proven its many advantages in the paper industry. The Hardinge, alone, has conical ends which gives greater protection against wear and breakdowns. The pulp beat with greater force permits moisture to encase itself in the fibre, giving your stock a better body. The rods are always in alignment, no friction against ends and the pulp level can be changed to any desired point without endangering rod or liner wear. Extra large trunions provide easy removal and replacement. If you want better stock—in less time—specify THE HARDINGE. It is made to give long service—AND DOES.

Drop us a card. We will have one of our engineers fully explain the Hardinge Rod Mill to you. Of course there will be no obligation.

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FORT WAYNE, INDIANA

Wisconsin Now Adopts Commercial Forestry

Executives of Paper Mill and Lumber Interests Plan to Check Dwindling Timber Supply, at Green Bay Meeting—D. C. Everest, of Marathon Paper Mills Co., One of Principal Speakers, Gives Illuminating Address

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., August 26, 1927.—Paper mill and lumber interests are planning to check Wisconsin's dwindling supply of timber at once through reforestation efforts made possible by a new state law, according to plans made at a meeting of about 100 executives of these concerns at Green Bay, Wis., this week. Selective cutting of standing timber and the planning of forest nurseries will be encouraged everywhere.

One of the principal speakers at the sessions was D. C. Everest, president and general manager of the Marathon Paper Mills Company, of Rothschild, Wis., and president of the American Paper and Pulp Association. "The future of the pulp and paper industry in Wisconsin depends on the rapidity with which we enter upon an active campaign of utilizing what we have at hand in the way of lands and knowledge for forest crop growth," Mr. Everest said. "We must show our good faith by practicing what we have advocated for years.

"The pulp and paper industry in the State of Wisconsin today ranks fourth in the value of its products as against other industries and has steadily advanced since 1880 when it occupied eighteenth place in relation to the nineteen other industries.

"When you consider that at least ninety per cent of the tonnage of paper used in the United States is made from wood, or from old papers previously made from wood, you have some idea of the dependency of the pulp and paper industry on the continued supply of timber available for that purpose.

"Everyone is familiar with the forestry problem in so far as fire protection is concerned. Nothing can be more evident than the necessity of fire prevention and suppression. Taxation is the second important item in the forestry program and with the recent passage of the Forestry Amendment and the later enactment of the forestry taxation measure, we have taken one of the most important steps toward a workable commercial forestry program.

"Within the state some concerns have either actually started forestry practice, including the raising of nursery stock for planting, or are now engaged in making a survey for that purpose."

Considerable credit was given the United States Forest Products Laboratory at Madison by Mr. Everest for its work in bringing about the use of a number of kinds of timber for paper manufacture, thus helping to conserve the existing supply.

Riverside Mill Improvements

Improvements in the boiler house and power plant are to be made by the Riverside Fiber and Paper Company, Appleton, Wis. New equipment is to be placed in the boiler room and a smoke stack 196 feet high will be constructed of reinforced concrete. The job has been let to C. R. Meyer & Sons Company, Oshkosh, Wis.

Frank J. Schneller Honored

Frank J. Schneller, vice president and sales manager of the Gilbert Paper Company, Menasha, Wis., was honored last week with election as state commander of the American Legion for Wisconsin. He is a veteran of the famous Thirty-second or Red Arrow division and was selected to lead the Wisconsin delegation back to France when the national convention is held there in September. He will be absent for about six weeks on the journey abroad. Mr. Schneller was the unanimous choice of the state.

Peshtigo Plant Damaged by Fire

Fire which started in the third floor of the finishing department caused damage recently amounting to $25,000 at the plant of the Peshtigo Paper Company, Peshtigo, Wis. Water damage was perhaps greater than that of the fire. The flames were subdued through the combined efforts of the Peshtigo and Marinette fire departments. With a large number of rush orders on the books, the mill was able to continue without a shutdown.

Aids to Safety at Appleton

Another aid to safety has been made possible at Appleton, Wis., through the generosity of the Kimberly-Clark Company. A building in connection with the company's Atlas mill, and the land on which it is located were deeded over to the city so a street could be relocated. The change will eliminate two hazardous railroad crossings which formerly had to be crossed by the employees and the trucks. The city is paving the street at this point, largely for the convenience of the mill traffic.

F. G. Kilp Gives Interesting Forestry Facts

Some interesting information on forestry also was given by F. G. Kilp, of the Nekoosa-Edwards Paper Company, Port Edwards, Wis. Mr. Kilp has charge of the forestry work for his company and explained that 3,200 acres of denuded land near Port Edwards has been converted into a forest nursery. A three year program of planting is in progress. The price of seedlings was found to be so high that the company has established its own nursery. The project is going along successfully, and is the first undertaken by a paper company on so large a scale.

Peshtigo Paper Co. Sale Postponed

The receivership sale of the Peshtigo Paper Company, Peshtigo, Wis., which was to be held in August, has been postponed until some time in September. It is expected that the plant will be disposed of at that time without any further delay so as to end its difficulties and place it on a sound financial basis. The mill's condition has improved remarkably since operation was resumed and P. M. Allen of Detroit, became receiver-manager.

Menasha Plant Equipment Changes

Finding it necessary to make some changes in equipment, the plant of the Menasha Paper Mills Company, Menasha, Wis., has been shut down for a week. Seven of the beaters have been replaced by four new ones of a much larger type. The plant is now consuming five carloads of straw in a day in the manufacture of strawboard. As the straw supply is plentiful in Wisconsin, the company finds it unnecessary to import the material from western states as at first planned.

Miscellaneous News of the Industry

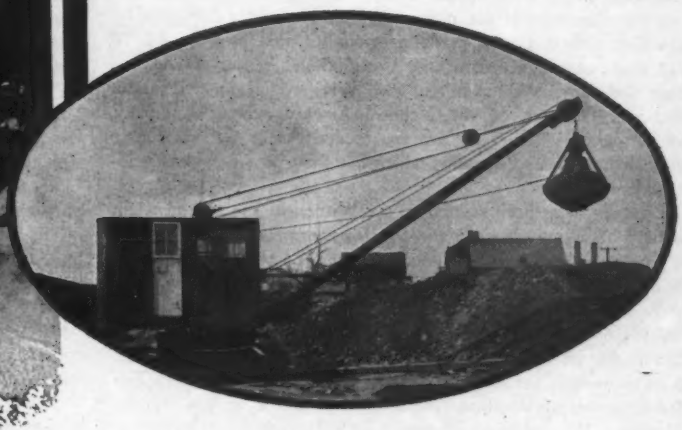
Due to the increased amount of pulp wood shipments, additional sidetracks are being built by the Chicago and Northwestern Railway at Kimberly and Combined Locks, Wis. These improvements will greatly facilitate handling of trainloads of wood at the Kimberly-Clark Company and Combined Locks Paper Company mills.

Preparations are being made by the Combined Locks Paper Company, Appleton, Wis., for entertaining of a crowd of 2,000 at the annual Labor Day picnic on September 5. The gathering will be held at the Combined Locks Park and the all day program includes games, contests, a band concert and dance.

Products of the Kimberly-Clark Company's mills at Neenah, Kimberly, and Niagara, Wis., and Niagara Falls, N. Y., will be exhibited in the industrial division of the Wisconsin state fair.

Brownhoist Products

Heavy Dock Machinery, Locomotive Cranes, Monorail Trolleys, Concrete Bunkers, Gas Shovels, Chain Conveyors, Belt Conveyors, Bridge Cranes, Coal Crushers, Buckets, etc.



5 Brownhoist Clamshells on $2,500,000 Sewer Job

An arm is no stronger than its hand, and no crane can pick up a bigger load than its bucket will bite. On this basis a large contracting company of New York proved to themselves, on their Long Island sewer job, that their choice of Brownhoist buckets was justified.

The five buckets were used chiefly for excavating the trenches for the pipe. The cuts were from 12 to 14 feet deep in hard packed material, but the clamshells, equipped with teeth, handled the job without stalling. Each bite meant a capacity load and was one of the reasons why the above company finished the contract before schedule time.

If there is a bonus clause in your contract it will pay you to use Brownhoist Clamshells. They stick to the job until it's finished and enable you to earn those extra profits your competitor often brags about. Send for Booklet 277 which describes the different types.

The Brown Hoisting Machinery Co., *Cleveland, O.*

Branch Offices: New York, Chicago, Pittsburgh, New Orleans, San Francisco and St. Louis.

BROWNHOIST
Clamshell Buckets

Mail This Coupon →

We are interested in further information and prices on a Brownhoist Clamshell of ½-yd.__ ¾-yd.__ 1-yd.__ 1½-yd.__ 2-yd.__ capacity for use on a_____ _____ to handle_____

Name _____

Street _____

*City*_____ *State*_____

in Milwaukee next week. The company has leased a space 100 by 40 feet in the manufacturers' building. Processes of manufacture will be shown as well as the products and by-products. The Kotex Company of Neenah, a subsidiary of the Kimberly-Clark Company, will also have a large display.

By using "save all" equipment, paper mills of the Fox River Valley have improved pollution conditions in the river considerably over the status a year ago, according to an inspection made by L. F. Warrick and C. L. Turner, of the Wisconsin Board of Health. Large quantities of pulp are now salvaged by the mills and the difference in river conditions is noticeable. A year ago the shores were lined with dead fish but this situation has not been prevalent this summer, the officials found. They give considerable credit to the paper mills for the improved condition.

Because of low water in the Wisconsin River, reservoirs at Tomahawk, Wis., were opened a few days ago to bring the level up to the proper point for power requirements. An inspection of the water situation was made previous to this step by G. W. Mead and Stanton Mead, of the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., and John Alexander and E. P. Gleason, of the Nekoosa-Edwards Paper Company, Port Edwards, Wis. They are representatives of the Wisconsin Valley Improvement Company, which has these water power facilities in hand.

Construction has been started by the Wisconsin Power and Light Company of a new dam on the Wolf River near Shawano, Wis. The dam will be of concrete and steel and the power station will have a turbine of 900 horse power. An automatic system will be used so that only one attendant will be necessary. Work will be completed by next spring.

Announcement has been made of the marriage of Karl E. Stansbury, one of the executive heads of the Thilmany Pulp and Paper Company, Kaukauna, Wis., to Miss Clara E. Klosterman of Shawano, Wis. The couple is on an extended western trip.

Start Work on Grays Harbor Mill

PORTLAND, Ore., August 26, 1927.—A dredge has started operations at the site of the Grays Harbor Pulp and Paper Company's projected plant at the mouth of the Hoquiam River in Washington, and the first of several hundred thousand yards of river silt is being pumped onto the grounds, preparatory to actual start of construction about September 1. The fill is being accomplished at this time in order to allow it to settle sufficiently. This fill will be made to a 15-foot level at first and will later be filled to near a 26-foot level.

An embankment on the east side and a heavy bulkhead on the river side of the site have been constructed to retain the fill. Contractors have finished cleaning up sawdust and slabs formerly used as a fill by the National mill people on whose site the paper plant will be erected.

So far only 800 of the 5,000 piling have been driven. Three drivers have been working and a fourth will start within a few days, and a night pile driving crew will be put on soon.

Work on the railroad spur construction has been temporarily suspended awaiting a visit of Zellerbach officials, as it is thought that some changes in plans regarding this phase of the work may be necessitated, probably a matter of relocating the spur.

Ferguson Gets Paper Mill Contracts

CLEVELAND, Ohio, August 29, 1927.—The H. K. Ferguson Company has been awarded the contracts for repairs and alterations to three large paper plants. The plants are the Fairfield Paper Company, Baltimore, Ohio; the Chillicothe Paper Company, Chillicothe, Ohio, and the Warren Manufacturing Company, Milford, N. J. According to H. K. Ferguson there is a tendency in the paper industry to increase efficiency and lower production costs by the installation of new equipment and the addition of new buildings.

Brown Hoisting and Industrial Works Merge

Directors of The Brown Hoisting Machinery Company, Cleveland, and Industrial Works, Bay City, Michigan, have approved plans for a merger of the two companies, to be made effective when ratified by their respective stockholders at meetings which will be held in the near future. Discussions leading to this merger have been proceeding for many months, and this announcement is the culmination of intensive work on the part of the late E. B. Perry, formerly president of Industrial Works, Alexander C. Brown, president of The Brown Hoisting Machinery Company, and other executives of the two companies. The businesses to be joined both occupy outstanding positions in the materials handling industry, and the merger is singularly auspicious from every standpoint. The physical properties, the earnings, the standards of design and workmanship, and the personnel of both companies are very similar. A well known firm of public accountants has made the following statement: "It has seldom been our experience to come into contact with a situation in which the conditions were as appropriate for a consolidation or merger as in this instance."

The object of consolidation is to render better service to users of material handling equipment by means of eliminating duplication or overlapping of product where it exists, by effecting economies in manufacturing and by concentrating in each plant that portion of the work which can be produced to the best advantage.

The Brown Hoisting Machinery Company was founded in 1880 by Alexander E. Brown. This company designs and manufactures hoisting and conveying appliances and heavy handling machinery of all descriptions, including locomotive cranes, grab buckets, combination shovels and cranes, ore unloaders, bridge cranes, gantry and portal cranes, trolleys, hand traveling cranes, and conveyor equipment. The principal plant of the company occupies nine and one-half acres, fronting on St. Clair avenue in the City of Cleveland, ten minutes ride from the heart of the city, and is served by switch tracks of the New York Central and Pennsylvania Railroads. The company also owns at Elyria, Ohio, twenty miles from Cleveland, twenty-five acres of land on which is situated a modern and completely equipped iron and bronze foundry.

Industrial Works was founded in 1873 by George C. Kimball, James Clements, E. Wells, and Charles R. Wells. W. L. Clements of Bay City was President from 1891 until his retirement in 1924, since which time Mr. E. B. Perry was President until his death on August 7 last. This company designs and builds locomotive cranes, wrecking cranes, heavy duty and full revolving pile drivers, crawler cranes and shovels for gasoline, steam, electric, or Diesel operation, gantries, pillar cranes, rail saws, buckets, and steam hammers. It also manufactures large coke oven machinery, including coke pushers, coal chargers, and clay carriers. The Industrial Works' Plant covers twenty-nine acres, consists of sixty buildings, has over 440,000 sq. ft. of covered floor space, and is served by five miles of its own railroad track, with motive power and rolling stock for internal transportation facilities. The plant is complete, having its own steel, iron, and brass foundries, pattern shop, machine shop, structural shop, boiler and blacksmith shops, and all other departments necessary to build its product from the ground up.

The consolidation will join under one management over twenty-one hundred people, and assets of approximately $13,000,000. The combined sales of both companies totalled over $7,700,000. in 1926. Both plants will be continued in operation, and no radical changes of any sort are contemplated.

Premier Paper & Power Co. Burned

According to advices from Montreal the pulp mill of the Premier Paper and Power Company, at Hartsville, N. S., was destroyed by fire a few days ago. The mill had not been in operation for some time past.

FOREIGN AND DOMESTIC
BLEACHED — UNBLEACHED
SULPHITES
KRAFT PULPS
GROUND WOOD

PERKINS-GOODWIN CO.
NEW YORK
ESTABLISHED 1846
551 FIFTH AVE.

PAPER
PRINTING PAPER
of
EVERY DESCRIPTION

New York Trade Jottings

Martin L. Griffin, the well-known consulting engineer, of Taunton, Mass., is visiting his many friends in the local paper industry this week.

* * *

Skinner & Co., general paper merchants, have purchased a five story building at 12 and 14 Greene street, New York, in the vicinity of the Holland Tunnel, for its own occupancy.

* * *

The regular weekly luncheons and meetings of the Salesmen's Association of the Paper Industry, which were discontinued during the summer holidays, will be resumed on Monday, September 12.

* * *

Many members of the paper industry are looking forward to the forthcoming Graphic Arts Exposition, which is to be held in the Grand Central Palace, New York, from September 5 to 17, inclusive, and an exceptionally good attendance is practically assured.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, who has been making a long and comprehensive inspection trip of the Middle West, the Pacific Coast, Alaska, and Canada, is expected to return to his New York headquarters about September 9.

Chicago Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., August 27, 1927.—The next meeting of the Paperboard Industries Association will be held at the Palmer House, Chicago, on Wednesday, September 21, and Thursday, September 22. One of the most important events will be the appointment of a nominating committee of two members from each of the three groups, namely: Paperboard, Carton, and Folding Box, who will nominate a president to be elected at the November Annual meeting. Group vice presidents and members of the Executive Committees are also to be nominated at the November Annual Meeting.

J. A. Carpenter, president of the Kansas City Paper House, Kansas City, Mo., and L. F. Leach, president of the Kansas City Paper House, Oklahoma, were entertained by Bob Butterworth of the Champion Coated Paper Company of Chicago, last week.

Thomas S. Donoghue, of the Warren Manufacturing Company, is spending his vacation in Michigan.

Edgar Hall, Jr., president of the Wrapping Paper Association, and vice president of the Pilcher Hamilton Company, of Chicago, is expected to return from a trip in the east this week.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 31, 1927.—The Government Printing Office has received the following bids for 20,000 sheets of 22 x 32—No. 70 marble grained jute board: R. P. Andrews Paper Company, at $93.90 per ton; Mathers-Lamm Paper Company, $97.00; Dobler & Mudge, $105.00; C. B. Hewitt & Bros., Inc., $82.50 less 1 per cent; Whitaker Paper Company, $85.37; Reese & Reese, $88.80; Thomas Barrett & Son, $95.00; and Lindemeyr & Karher, $110.90.

New L. L. Brown Agent

The Field-Hamilton-Smith Paper Company of Omaha, Neb., has been made agent in that territory for Brown's Linen Ledger, Greylock Linen Ledger and Advance Bond, three of the well known quality products of the L. L. Brown Paper Company, of Adams, Mass. All three lines are being stocked in representative items and arrangements have been made to assure prompt service on any mill stock items not carried in Omaha.

Chicago Paper Market Situation

CHICAGO, Ill., August 27, 1927.—Paper dealers here have swung from the necessary mark-time interval into the forward march of fall buying and already several groups have advanced far enough from the bivouac of seasonal slump to feel ready for the quick step of supplying winter demands for the holidays. Others state that they expect the fifteenth or latter part of September to be the renaissance of their sales. The demand for printing papers is naturally beginning to awaken and orders are being booked for the fall and winter catalogs. The surplus stocks are now practically exhausted and the publishing houses are receiving stock in good quantities quite consistent with the demand.

Paraffine and glassine papers are steady, but some peculiar freak of demand has moved the delivery of orders from Chicago to the East. Distributors here state that this is not unusual but that they had expected the Chicago consumers to be the first to call for their products when numerous orders from eastern territories began to come in, especially from bag manufacturers.

Everyone feels that the summer slump is over and it is gratifying to note strong feeling of harmony existing in this highly competitive field undoubtedly sustained by the absence of price cutting. Numerous authorities have voiced this sentiment. An interesting feature of this season is the peculiar demand of advertising counsels for unusual folds in brochure and folder work. This naturally has created a demand in those grades endowed with folding qualities.

Wrapping paper has seasoned the summer well and felt the full demands possibly earlier than the printing paper. Twine and allied products are keeping pace and sales reports substantiate the early forecast of an equalization that will not only counteract any subnormal condition that may have existed but will show a marked increase of sales as compared with those of a year ago.

News of the Boston Paper Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., August 29, 1927.—Tileston & Hollingsworth's "How" for August publishes a letter from a New England printer which urges the paper houses to agree to put out the same sized price lists so that their customers can bind them and have them handy on their desks. The letter also intimates that it would be advisable for the paper houses to adopt a uniform system for presenting their prices.

The annual meeting of the distributors of Certificate Bond and other lines of the Crocker-McElwain Company, Holyoke, Mass., will be held during the week of September 26 at the Hotel Nonotuck in that city.

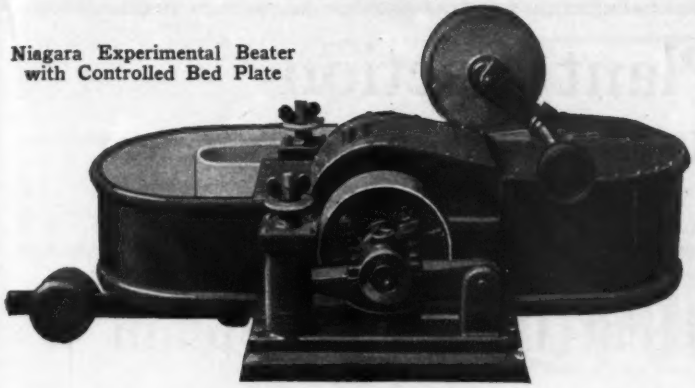
John Carter & Co., Inc., are to be the New England distributors of Inca Cover, a new line, just placed on the market.

Charles W. Fields, vice-president of Baird & Bartlett, is enjoying a two weeks' vacation, which includes a trip to Niagara Falls, New York State, and New Hampshire.

Chicago Salesmen Enjoy Golf Outing

[FROM OUR REGULAR CORRESPONDENT]

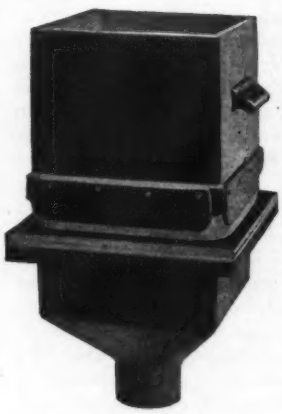
CHICAGO, Ill., August 27, 1927.—R. C. Johnson, chairman of the golf committee of the S.A.P.I., reports that two unusual events marked the second golf outing held at Wilmette Country Club, August 18. One was the uncanny ability of Fred Whitely to retrieve richochet shots on the course, not to mention fairways. The other was the inability of contestants to prove conclusively that the necessary bits of lettuce were placed in the hands of the Worthy Keeper of Exchequer, J. R. Russell. The second event must not be misconstrued, however, for although it occasioned a great deal of jocular comment among the party, the situation was thoroughly ironed out before the nineteenth hole was reached. Fifteen members enjoyed the outing.



Niagara Experimental Beater with Controlled Bed Plate

You Accurately Control Your Paper Manufacturing Processes with VALLEY LABORATORY EQUIPMENT

Valley Hydraulic Press for Removing Water from Sheets



Valley Sheet Mould for Forming Test Sheets

Valley Hot Plate for Drying Test Sheets

Many of your paper making problems can be solved by your accurately controlling your selection of raw materials that enter into your manufacturing processes. Laboratory equipment is the method of control. It eliminates guess-work, wasted effort, waste of time and materials—and insures uniformity and quality of your paper.

Valley Laboratory Equipment was developed by practical and technical men. When you buy it you receive *original* testing apparatus that has taken six years to develop in our cooperative mill laboratories. Now 75 mills use Valley Laboratory Equipment.

When you purchase Valley Laboratory Equipment you know you are getting proper devices to accurately control your manufacturing process—but you are getting far more. You are getting *service, testing methods* and *results* that this equipment will give.

Write today for Laboratory Equipment booklet. It contains information of value to every mill interested in accurate control of manufacturing processes.

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: 350 Madison Avenue

Western Mfg. & Sales Div., Smith & Valley I. W. Co., Portland, Oregon

Power Plant Section

Reducing Power Costs Through Unit Treatment

Conducted by REGINALD TRAUTSCHOLD, Consulting Engineer

Recuperation of Heat Losses By Steam Superheaters and Fuel Economizers

In an industry so dependent upon the efficient use of steam, not only for power purposes, but to an even greater extent for process requirements, it appears strange that more attention has not been given to the very substantial savings to be realized through the adequate superheating of the steam at the boilers, in connection with paper making and pulp production. True, the recent installation at the Paul A. Sorg Paper Company at Middletown, Ohio, provides a superheat at the boiler of some 250 degrees Fahrenheit. At the Consolidated Water Power & Paper Company at Wisconsin Rapids, Wis., also, steam at 250 degrees superheat is employed, and in Canada there is at least one plant which carries even higher superheat at the boiler. These, however, are somewhat unusual in that in each case the steam is generated at 450 pounds pressure to accommodate exacting load conditions. Ordinarily, only a very moderate degree of superheat is provided, if any, and it is to this practice that exception can very rightfully be taken.

The chief engineer of a moderate size plant, when approached for information concerning the use of superheated steam at his plant, advised that a superheat of 100 degrees was employed, for the reason that dry steam is essential for the economical operation of the steam turbine unit employed. He also stated that this degree of superheat is just about sufficient to keep the steam dry at all points in the steam transmission system. Incidentally, so satisfactory has been the use of this moderate superheat in this particular plant, that it has been decided to employ superheaters in all future boiler installations.

A somewhat larger mill also reported the use of 100 degree superheated steam, in order to reduce condensation losses between the boilers and the turbines and between the turbines and the dryers on the paper machines, stating that the objective in so doing was to deliver practically dry saturated steam without any superheat to the paper machine dryers. The reason given for this care to avoid the presence of any superheat in the steam delivered to the dryers is that superheated steam does not give up its heat as readily in the dryers as dry saturated steam, so decreasing the drying rate on the paper machines.

These opinions are cited, together with the statement of one of the most prominent of boiler manufacturers that fully 85 per cent of the boilers his company installed are equipped with superheaters, to show there is a decided hesitancy, if not fear, on the part of paper mills of over-heating the steam. Admittedly, superheated steam is distinguished from dry saturated steam principally in that it will not condense until its temperature drops to that of saturated steam at the same pressure. The excess heat is chiefly insurance against condensation. At the same time, heat transfer is much lower with superheated than with saturated steam.

However, the condition of dry saturated steam, which would be ideal for delivery to the dryer or wherever the latent heat of steam is to be utilized, may be said to be only relative, in so far as it can rarely be maintained at any given point in the steam passage. As the steam enters the dryers, it probably has either already commenced to condense or else it carries some degree of superheat. The secret of effective steam utilization then lies in whether it is more costly to have condensation start before the steam reaches the dryer or to have the steam retain a slight excess temperature as it passes into such chambers. The balance is of necessity a sensitive one, for on one side of the elusive point at which condensation commences moisture is an expensive detriment, on the other side, excess heat tends to slow down important processes.

Fortunately, it is not difficult to ascertain the quality of the steam entering the dryers, nor is it difficult to place a fairly dependable estimate upon the cost of any possible slowing up of drying processes attributable to the presence of superheat in the steam supply. Also, the cost of moisture in steam where it is detrimental in any way can be appraised with considrable accuracy. The problem of economic heat balance, upon which the worth of steam superheating so largely depends, consequently, is not as baffling as it may appear, although its solution will vary with almost every mill. Practical economy demands that gains in one direction must not be made at a cost to some other phase of operation.

Worth of Steam Superheating

The chief savings to be derived from the use of superheated steam are those based upon the reduction in condensation and the greater efficiency incident to the use of a dry gas for power generating purposes. Each 1 per cent of moisture in steam used by power units entails an increase of about 2 per cent in steam consumption. In steam engines, economy in steam consumption is attained through reduction in cylinder condensation and in the

Plant	Equipment	Investment Entailed	Major Improvement Realized	Estimated Annual Saving	Yearly Yield on Investment
Consolidated Water Power & Paper Co. Wisconsin Rapids, Wis.	Foster Economizer at 100% boiler rating at 200% boiler rating at 300% boiler rating	.....	Fuel Conservation	10.3% fuel saved 11.3% fuel saved 12.9% fuel saved	.....
P. H. Glatfelter Company, Spring Grove, Pa.	3 Sturtevant Economizers	$25,350.00	Heat Reclamation	$6,623.65	26.0 per cent
Mount Hope Finishing Company, North Dighton, Mass. (Bleachery and dye house.)	2 Sturtevant Economizers	$16,500.00	Fuel Conservation	$10.045.66	60.7 per cent

DU PONT

Du Pont observes a century and a quarter of usefulness to the American People

AN ANNIVERSARY can be either a point from which one looks backward, or a point from which one looks forward. Du Pont regards its 125th Anniversary as a point of *departure, not as a point of arrival.* Du Pont believes that its scope of usefulness calls for no yardstick of years past to measure it, because it is the years to come that will measure du Pont's largest usefulness.

The policy on which du Pont has grown is a policy by which those who do business with du Pont grow.

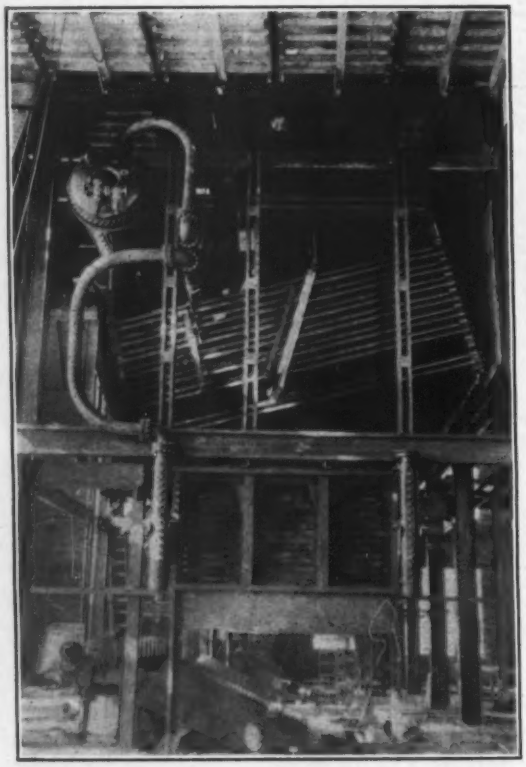
SYNTHETIC ORGANIC CHEMICALS

E. I. DU PONT DE NEMOURS & CO., INC.

DYESTUFFS DEPARTMENT

case of steam turbines, by a reduction in both temperature drop and in radiation losses.

Moisture in steam acts as an eroding element, wearing away turbine blades, etc., and materially increasing maintenance expenses. The friction of water passing through the blades or turbine stages is also much greater than that of dry steam, thereby reducing the useful power generated per pound of steam to a noticeable extent and necessitating increased steam consumption. Fuel savings from 5 to 25 per cent have been made through superheating steam from 25 to 250 degrees, the largest proportionate gains taking place with moderate degrees of excess heat content. In fact, the gain beyond 100 degrees superheat is claimed by some authorities as being of relatively small importance, largely because



Foster Combination Superheater at Consolidated Water Power & Paper Co., Port Arthur, Que. Steam Is Generated at 385 Pound Pressure and 265 Degrees Superheat at 200 Per Cent Boiler Rating

of the increased necessity of providing for suitable lubrication. Be this as it may, moderate degrees of superheat are decidedly efficacious in reducing steam consumption and conserving fuel.

In a power plant operating on steam at about 200 pounds pressure, 25 degrees superheat will reduce steam consumption by the power units by some 3.00 per cent, effecting a reduction in fuel consumption of 1.60 per cent. With 50 degrees of superheat, the saving in steam consumption is about 6.00 per cent, effecting a reduction in fuel consumption of 3.75 per cent. The corresponding economies with 75 degrees superheat are 10.00 and 6.40 per cent, respectively, and with 100 degrees superheat, a 14.25 per cent saving in steam will result with a corresponding reduction of close to 9 per cent in fuel consumption.

The elimination of water in steam lines by superheating is also important and, not only desirable from the point of view of efficiency, but because small size and fewer steam-traps are required for proper plant operation. A superheating of steam to 50 or 60 degrees will eliminate as much as a pound of condensate per lineal foot of pipe per hour.

In the pulp mill, superheated steam in the digesters will also materially reduce cooking time and will facilitate the recovery of chemicals. Properly regulated, it will also be instrumental in the production of a superior grade of pulp.

Superheaters of various makes, guaranteed to raise the temperature of steam of given quality to any practical temperature, are now procurable for a few dollars a boiler horsepower capacity. Erection and installation will add perhaps 10 per cent to the equipment cost.

Should Be Given Careful Consideration

The superintendent who will give careful consideration to these general and far from extravagant claims for advantages pertaining to the worth of steam superheating for the paper mill will probably lose some of his dread of the effect of any superheat in the steam supply to paper machine dryers. He will appreciate that complete avoidance of any excess steam heat at such point can only be assured by contracting more or less serious previous condensation losses and, possibly, inefficiencies in power production. Let him but once resolve these common wastes into dollar and cent equivalents, sum them up and balance them against any possible loss contracted through some slight retardation in the dryer rate on the paper machine due to delaying condensation until such surrender of heat can be capitalized upon to the utmost and he is almost certain to become an advocate of employing superheated steam so far as is practical. A little excess heat can be discarded with greater impunity at the end of the line than it can be wasted anywhere along the line. Furthermore, at the end of the line it need not be wasted, but utilized in some preliminary heating operation, such as raising the temperature of boiler feed water, etc.

Fuel Economizers

Related in a measure to equipment for superheating steam, in that they are also devices for conserving fuel and making the most effective use possible of the boiler plant, are fuel economizers, though they differ radically in that their use can precipitate little danger of a gain in one direction at a cost to some other phase of operation. All heat which can be reclaimed, recuperated, by economizers is profitable and the more effectively such equipment can be made to operate the greater is their value. For this very good reason, there can be no question raised as to the value of economizer practice.

In the paper industry, the value of fuel economizers has been appreciated since any attempt has been made to run the power plants economically and they are employed to store tremendous volumes of hot water for boiler feed purposes and also for various manufacturing processes. Since they reclaim heat from the flue gases, which would otherwise be wasted, their use entails the consumption of no additional fuel and since paper mills habitually operate on a 24-hour schedule, which means relatively insignificant fixed charges and greatly accentuated operating costs, economizers invariably yield a high return on investment from a fuel-saving standpoint. The economizers may also be profitably used for heating other liquids, such as caustic soda, the heat being supplied at no fuel cost, and the excess heat may be employed to preheat air for furnace air supply and other purposes.

In fact, with the modern steam generating unit relatively little of the heat generated in the furnace need be wasted. Close to 25 per cent of the heat will work on the boiler surfaces exposed to radiant heat, an equal amount on the first pass of the boiler, then 10 or 15 per cent will act on the superheater, 10 per cent or so on the later passes of the boiler, 10 per cent or thereabouts on the economizer, and as much can be made to work productively in the air heater. Overall efficiencies of close to 90 per cent have been attained in some instances.

Some Operating Statistics

At the Wisconsin Rapids plant of the Consolidated Water Power & Paper Company, for example, four economizers and air heaters in connection with 819 horsepower boilers operating at 450 pounds pressure and some 250 degrees superheat provide performance records of which the following are typical:

To serve Industry still better

Extra Years of Service

Morse Silent Chain Drives always have been noted for their dependability and long life. Many installed 15 and 20 years ago are still operating satisfactorily.

The Morse Chain Company now announces refinements in the design of their chain—the new design is designated No. 55 type.

This new design provides a better balanced joint, which has materially reduced the wear, and this means added chain life.

Now, with the new and improved Morse Rocker Joint, extra years of service are added to Morse Chains. Changes in the contour of the rocker pin and an increase in cross section of seat pin have made a joint more rugged and sturdy, 8% heavier, and with an increase of 50% in breaking strength.

MORSE CHAIN COMPANY

Ithaca, N. Y., U. S. A.

Atlanta, Baltimore, Birmingham, Boston, Buffalo, Charlotte, Chicago, Cleveland, Denver, Detroit, Louisville, Minneapolis, New Orleans, New York, Omaha, Philadelphia, Pittsburgh, San Francisco, St. Louis, Toronto and Winnipeg, Canada.

MORSE SILENT CHAIN ←55→ DRIVES

[OST 1981R]

Boiler rating, per cent	100	200	300
Water entering economizer, temp., deg. F.	210	210	210
Water leaving economizer, temp., deg. F.	275	276	284
Pounds of air through heater	30600	62100	94800
Air entering heater, temp., deg. F.	60	60	60
Air leaving heater, temp., deg. F.	237	266	298
Pounds of gas leaving boiler	36000	73100	111500
Gas leaving boiler, temp., deg. F.	525	600	690
Gas leaving economizer, temp., deg. F.	350	425	497
Gas leaving air heater, temp., deg. F.	200	250	295
Coal saved, economizer and air heater, per cent	10.3	11.25	12.9
Efficiency, including economizer and air heater, per cent	86.4	85.4	83.8

The operating data at the St. Maurice Valley Paper Company at Three Rivers, Quebec, where the water passing through the economizer connected with 556 horsepower boilers is elevated an average of 100 degrees in temperature, shows economies of much the same order.

Boiler rating, per cent	100	150	200
Gas entering economizer, temp., deg. F.	475	500	540
Gas leaving economizer, temp., deg. F.	259	288	317
Water entering economizer, temp., deg. F.	180	180	180
Water leaving economizer, temp., deg. F.	273	279	288

At the Mac Sim Bar Paper Company plant at Otsego, Mich., six economizers are in use with boilers operating at 200 pounds pressure and 125 degrees superheat, which under normal conditions of operation supply 22,500 pounds of steam an hour. The feed water temperature is raised from 200 to 300 degrees by the economizers.

The cost of these economizers whose use effects such very well worthwhile economies in fuel consumption average only a few dollars per boiler horsepower and, naturally, very substantial returns accrue to the investment entailed for their installation. This, however, is most conclusively demonstrated through consideration of more detailed cost figures, an instance being shown in the records for the P. H. Glatfelter Company plant at Spring Grove, Pa.,

Air Heater Installed at the Wisconsin Rapids Plant of the Consoljdated Water Power & Paper Co.

where two of the three economizers now in use have been in operation for over ten years and are still returning dividends at the rate of 26 per cent per annum.

One of the older economizers serves four 500 horsepower boilers and the other, three such boilers, while the newer economizer is used with a more modern 1,000 horsepower boiler recently installed. Steam is generated at 150 pounds pressure and is employed in the various paper manufacturing processes and to operate a 3,000 kilowatt turbo-generator unit in the power plant. It is also used for miscellaneous heating purposes in the mill and some steam is sold to residences of the city for heating, so certain of the boilers are in continuous service and all of them in 24-hour operation six days a week. To secure the best attainable efficiencies for the boilers, they are customarily driven at from 135 to 155 per cent of rating.

The average rise in temperature of the feed water passing through the economizers is about 45 degrees Fahrenheit, though occasionally a 48 degree rise is secured. The average quantity of water circulating through the three economizers each month is about 75,000,000 pounds, so the total heat reclaimed from the flue gases during the month is equivalent to that which would be secured by the consumption of approximately 178.7 tons of coal of 14,500 B.t.u. value. This represents a gross saving in fuel of $10,722.00 a year, almost 42½ per cent of the entire cost of the economizers and of their installation. Making due allowances for all fixed charges, depreciation, expenses in connection with operating and cleaning the economizers and making suitable provisions for the incidental power needed to make-up for some reduction in draft supply, the net yearly saving amounts to $6,623.65, or a net annual return on the investment of 26 per cent.

Elesco Superheater in a Plant of the International Paper Co.

Economizer Value in Process Operations

These results are quite probably exceeded in other paper mills, but so prevalent is the belief that so large a proportion of the steam employed in the paper mill is used in process operations that such savings, which are frequently looked upon as pertaining chiefly to economical power consumption and fuel conservation, are often held not to apply to the average paper mill. For this reason, it may be pertinent to draw upon the results secured with economizers in another variety of mill, where the steam is also more largely used in process operations than in power production, for further evidence of the money earning capacity of fuel economizers in process work.

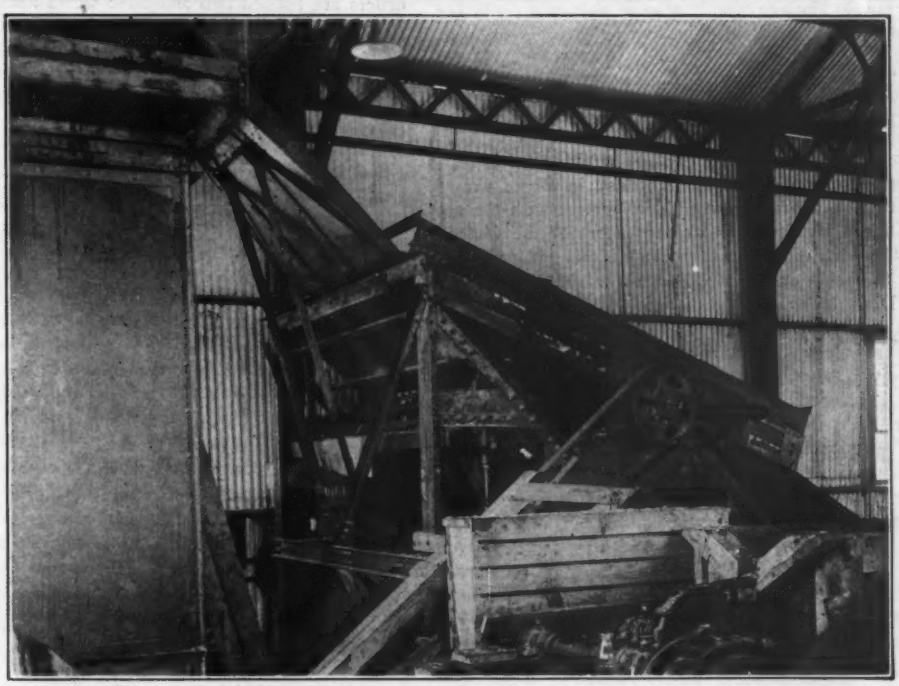
Such a plant as that of the Mount Hope Finishing Company at North Dighton, Mass., should serve admirably in this respect, for it is one of the largest establishments in the country devoted to bleaching, dyeing and mercerizing all kinds of cotton and silk goods, consuming relatively little steam for power purposes and a great deal in process heating requirements. The plant is one employing fuel oil for generating steam in its four 600 horsepower boilers, served in pairs by two staggered tube type economizers.

The boilers generate saturated steam at 130 pounds pressure, two of the boilers being operated 24 hours a day and the other two 12 hours daily. These operating conditions are not very dissimilar to those habitually encountered in the paper mill. The practice is to drive the boilers at about 150 per cent rating, in order to secure the highest attainable efficiency in steam generation —another condition familiar to paper mill operators.

The flue gases leave the boilers and enter the economizers at 520 degrees Fahrenheit and leave at 330 degrees. This drop of 190 dgrees in flue gas temperature suffices to elevate the tempera-

RYTHER AND PRINGLE COMPANY CARTHAGE N.Y.

RYTHER CHIP SCREEN



INSTALLED IN WOOD ROOM OF 40 TON SODA MILL

CLOSED SYSTEM WITH CRUSHED REJECTS RETURNING TO ELEVATOR

CAPACITY—12 CORDS PER HOUR **2-HORSE POWER**

FOR CANADA REFER

CANADIAN INGERSOLL-RAND COMPANY, LIMITED

10 PHILLIPS SQUARE, MONTREAL, P. Q.

ture of the water circulating through the economizers 70 degrees. Some 2,232,000 pounds of water pass through the two economizers daily, picking up in so doing 156,240,000 B.t.u. every 24 hours. This reclamation is equivalent to the recuperation of 1,328 gallons of fuel oil a day. The saving thus effected amounts to $50.46 per day, or $13,321.44 during the year.

The total cost of installing and operating the two economizers, including all fixed charges, depreciation, maintenance, power and labor entailed, etc., amounts to $3,265.78 a year, making the net annual return a matter of $10,945.66. This is a yield of 60.7 per cent on the entire investment entailed for the economizer installation.

Putting Waste Heat to Work

Whether the paper mill management lays more stress on low steam costs for process operation or for power production, it will prove excellent business to attack the recuperation of steam heat losses with the utmost diligence. The use of superheated steam so far as it is practically feasible and economically sound will pay, as will undoubtedly every particle of heat which can be reclaimed from the flue gases by the use of fuel economizers. Yes, and other thermal economies which entrap any of the heat striving to escape via the stack.

Largely through efforts such as these has the modern electric public utility plant succeeded year after year in reducing the cost of its product in the face of very substantial and continuous increases in unit charges and expenses of all descriptions. The paper industry can do likewise, for it is quite immaterial whether the activities take the form of paper making or the generation of electric energy.

To Demonstrate Practical Forestry

[FROM OUR REGULAR CORRESPONDENT]

WARRENSBURG, N. Y., August 29, 1927.—The first forest dedicated to the demonstration of practical forestry in all its phases will start operation on a broad plan of development with the appointment of Clifford H. Foster as superintendent of the Charles Lathrop Pack Demonstration Forest, north of this village. Announcement of the selection of Mr. Foster for the position has been made by Dean Moon, of the New York State College of Forestry at Syracuse University.

The Pack Forest is located three miles north of Warrensburg on the main highway between New York and Canada and consists of 2300 acres. The forest was presented to the Forestry College last year by Mr. Pack, the forester-economist, who is president of the American Tree Association.

The idea of a public demonstration forest where forestry in all its phases is presented, is new. Experimentations in reforestation and forest protection have been organized in many sections of the country but never before has a large forest been turned over to forest management for public education. The area is in the heart of the old white pine region of New York State and it is estimated that nearly three million feet of coniferous trees stand on the tract as well as about two million board feet of hardwoods.

Mr. Foster, the new superintendent, is a graduate of the New York State College of Forestry and after graduation did considerable research on the Harvard Forest at Petersham, obtaining from Harvard University in 1923 the degree of Master of Science. For the last four years he has been forester for the E. Murdock Company and in this connection had charge of all forestry operations on 12,000 acres of commercially operated timberland near Winchester, Mass.

He has developed a tree nursery of over two million trees capacity and has conducted special surveys of the wood box industry of the northeast under the auspices of the Harvard Forest and the Council of the Northeastern Forest Experiment Station, United States Forest Service.

Under the supervision of Mr. Foster the variety of problems involved in the production of forests from the seed to mature will be worked out at the Peck Forest.

Boston Paper Market Fairly Active

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., August 29, 1927.—Paper dealers, as a whole, in this market are securing a fair amount of orders for the season of the year. It is unnecessary to state, perhaps, that they do not expect phenomenal activity during the summer, but do look for dullness. Some have experienced considerable slackness and still do. Others find business spotty, and a third group reports business "going along well." The market appears to be holding its own, and at least some mills have found interest enough "to keep them going."

A man at one of the prominent houses does not look for any change in prices, but does see a prospect of a greater volume of orders after Labor Day. One dealer reports the market steady with an improvement in the amount of business for his house in August over that of July. Another intimates that, generally speaking, the big mills are getting more and more business. He says the value of advertising is dawning more and more on the business man. Carrying his convictions into practice calls for more and more paper. As fall approaches, with much optimism expressed for future activity, this feeling is gfadually bringing about an increased volume of orders.

Box board dealers find a sustained interest in their commodity. Prices are holding firm. The recent advance of $2.50 for single manila pulp lined board, bringing the quotation up to from $57.50 to $62.50, is firmly maintained. Inquiry is coming in well, and orders are booked two and three weeks ahead.

The paper stock market is firm, showing further advances in some cases. Newspapers and mixed papers are noticeably active. Indications are that the market will be higher. White blank news is now quotable at $1.75 per hundredweight, compared with a previous range of $1.50 to $1.60. A dealer sold two carloads at $1.75 during the latter part of the week under review. Old No. 1 mixed paper has been selling well at 60 cents, compared with a previous high of 52½ cents. Overissue news has jumped up 5 cents per hundredweight, and is moving in sizable quantities at 75 cents. Old newspapers are bringing 60 cents compared with a former price of 55 cents.

In bagging, foreign gunny is strong at $1.75 a hundredweight, although there is very little demand for this material. The price is based on the shortage. Domestic rope is fairly firm at $4.25 to $4.37½, an advance from $4.00 on the low side. Mixed strings are quotable at 90 cents to $1.00. Scrap burlap is moving at $1.50 to $1.75, compared with a previous price of $1.35.

Improvements at Clifton Paper Mill

The new board machine recently installed at the Clifton Paper Mills, Clifton, N. J., is equipped with a Ross Vapor Absorption System. This mill is one of the first in the United States to have a false ceiling below the trusses, giving air space between the ceiling and the roof. This is the type of installation which has been adopted for many of the large Canadian mills.

The Clifton Paper Mill was designed and built under the supervision of Karl A. Lefren, consulting engineer, of New York City. The general ventilation for the whole machine room and the heating for the finishing room is being done by the J. O. Ross Engineering Corporation, of 30 East 42nd street, New York.

Butler Papers Available in Boston

BOSTON, Mass., August 22, 1927.—The announcement of the appointment of the Stone and Andrew Company as New England distributor of the Butler Paper Corporation's line of Campania Deckle Edge Bond and Cover Stock has been received with extreme interest. For the first time in the New England market the Butler papers are now available from warehouse. Campania approximates a hand-made paper of exquisite texture and coloring, gratifying alike to the printer and producer of artistic creations of distinctive appeal in modern publicity. An unusual sample book of this line has been prepared for distribution.

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Bogalusa Paper Co.,
Bogalusa, La.

Brown Corp.,
La Tuque, Que.

Canada Sugar Refining Co., Ltd.,
Montreal, Que.

International Paper Co.,
Gatineau, Que.

International Paper Co.,
Niagara Falls, N. Y.

International Paper Co.,
Piercefield, N. Y.

Manitoba Paper Co.,
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THE KRAFT PAPER INDUSTRY

The steady increase in production of Kraft paper has brought this industry to a point where it stands in constant danger of over production from year to year, the National Bank of Commerce in New York states, after a survey of this department of the paper making industry which it has just concluded and which is covered at considerable length in the current issue of *Commerce Monthly*.

The Kraft wrapping paper industry in 1926 enjoyed the best year since the post-war depression. Certain very definite improvements have been made in the past three years. Production of Kraft has grown steadily from 382,000 tons in 1923 to approximately 550,000 tons in 1926. Normal requirements in this country increase about 5 per cent each year, and consumption and use of productive capacity in 1926 came closer to normal than at any time since the war. Moreover, important economies in production methods have been developed.

With full recognition of this, the rapid growth of the Kraft paper industry has brought it to a critical point in its development. The industry last year operated at about 85 per cent of practical capacity or 78 per cent of theoretical machine capacity. Two-thirds of the industry operated at a loss, one-third made a profit.

The consumption requirements in this country have by no means reached the possible maximum annual production so that the industry stands in constant danger of over production from year to year. In the face of this situation, if present plans for new mills materialize it is expected that capacity for producing a half million tons of kraft pulp annually will be added to present capacity by the end of 1929.

Kraft is the strongest paper made for general use. It is the backbone of the wrapping paper branch of the paper industry, since it constitutes by quantity and by value approximately one-third of the entire output. The value of the production of wrapping paper in 1925 was approximately 145 million dollars, of which amount over 50 million dollars was kraft. On account of the increased production last year the value of kraft output was probably in the neighborhood of 55 or 60 million dollars.

Kraft enters most extensively into our commercial and business activities, both as a protective cover for goods and merchandise, and in innumerable other ways.

The accepted grades of kraft are "convertible," "number one," and "number two." The convertible kraft industry is situated in the North, where it is likely to remain for a long time on account of the nature of the raw material, equipment and skill of the workmen acquired through years of experience. Number one kraft paper is used for a variety of important purposes. One of its familiar uses is in the manufacture of strong envelopes and for high grade wrappings. This grade of paper, also made chiefly in the northern mills, is unsurpassed anywhere in the world. Number two kraft includes all lower qualities. Paper manufactured in the South is usually designated as "southern," which includes the better as well as the lower grades.

The manufacture of kraft paper in the United States began about twenty years ago. As is true of many other basic industries its production started on the scene of abundant raw material and power. Therefore the industry was first established in New England and New York. After a few years, the rapid development of the Middle West and the abundant supplies of pulp wood available in the Lake States made possible the development of a sizable kraft paper industry in that area.

Perhaps there is no single factor that will have a greater influence on the future of the paper industry than the opening up of the vast quick-growing resin wood areas in the South. Present productive capacity in the South is estimated to be around 200,000 tons annually, which is over one-third of the yearly output of kraft paper in the United States.

The kraft paper industry in the Pacific Northwest is still in its infancy. However, the several projects contemplated promise to make the mills established in that area an integral factor in the American kraft paper industry. This development in the timber region between the Rockies and the Cascades marks the exploitation of the last great stronghold of American pulp timber supplies.

The several mills under construction when completed will increase the Pacific Coast's potential production far beyond local requirements and necessitate encroachment on marketing areas now supplied primarily by the older factors in the industry. Whatever may be the ultimate result of this new development, western proponents are quite sanguine. The principal effect of the development thus far has been to reduce the volume of paper normally moving westward. In the event that productive capacity exceeds local requirements the problem of the long haul from West to East will arise.

In the South and Northwest there are abundant supplies of raw material. These areas are becoming rapidly the big competitive factors in the domestic kraft paper industry in the United States and producers in these low-cost mills are in large measure like price determinants of the industry. For this reason additional manufacturing facilities to take care of a normal expansion in demand are being installed where raw material is cheap and abundant.

In the twenty years or so of the existence of the kraft paper industry steady progress has been made in technical improvements and in volume of output. The American industry suffered a setback in the period of post-war depression, recovery from which was slower than in many other industries. Demand for kraft has no doubt kept pace with growing commercial activity, but productive capacity has exceeded the bounds of conservatism. With further expansion in progress, the industry awaits with interest the ultimate effects of recent developments on the long-time trend.

Mr. McBain Explains

PORTLAND, Ore., August 20, 1927.

EDITOR, PAPER TRADE JOURNAL:

While in Aberdeen, Wash., on the 16th, I received word of the article in your last edition and wired you as follows:

"Doctor Baker has referred me last issue July PAPER TRADE JOURNAL to see absurd article sent you by some unknown person. When retracting this article please do not use my name in connection with it because as you know I did not send it to you and had absolutely nothing to do with it in any way. Thank you."

On my return I found your August number which mires things up worse for "The Journal" for "two wrongs do not make one right."

You now say you copied an article from another Journal "evidently written by Mr. McBain."

I do not send out any articles without my own name on them. I did not hear Doctor Baker speak at the Portland Chamber of Commerce. He is one of my best friends in the industry and favored me with two days of his time while out here. I would have been at the meeting mentioned, but Mr. R. S. Kellogg was also in Portland on that day and the invitation of the Hoo Hoo Club to hear Mr. Kellogg came before the one telling of Doctor Baker's meeting. In any event, I wanted to hear Mr. Kellogg and following the meeting Doctor Baker, Mr. Kellogg and myself visited three mills together, parting only when the late night forced that action.

I have not seen in any Portland paper the article you copied and had nothing whatever to do with it, either directly or indirectly in the way of writing it, printing it or forwarding it to you. In fact, I think you will find the data contained therein was published some months ago in a Pacific Coast publication and possibly the person who wrote it for the Portland paper copied it from this other journal.

Please retract your statement that this article was from my pen. The PAPER TRADE JOURNAL has never published my writings, direct or indirectly, and should take full blame for publishing this absurd article regarding Doctor Baker's Portland address.

You have my permission to publish this letter.

Very truly yours,

B. T. McBAIN.

[The article in question was reprinted simply because it reviewed rather well the interesting developments in the pulp and paper line that are taking place on the Pacific Coast, and was apparently sponsored by representative men in the industry. In the correction, which was printed before Mr. McBain's telegram was received, it was not intended to convey the impression that the article in its entirety had been written by Mr. McBain, but simply that the statement regarding the mills had been. The PAPER TRADE JOURNAL regrets that the correction was open to any other interpretation. Mr. McBain, as he states, was not responsible in any manner for the printing of the article in the PAPER TRADE JOURNAL. The correction printed in the issue of August 11th was not prepared with any intention of excusing the PAPER TRADE JOURNAL. It was printed solely with the thought of correcting, as far as possible, a false report that the PAPER TRADE JOURNAL had unwittingly helped to circulate.—EDITOR.]

Brighter Prospects for American Writing

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., August 30, 1927.—The Boston News Bureau last week printed the following on the American Writing Paper Company:

"Prior to the reorganization of the American Writing Paper Company, last year the preferred and common stocks of the company had sunk to purely nominal levels of $1 a share or less. Stockholders were asked to pay assessments of $10 and $5 a share respectively by preferred and common, but the securities given for the new money have since had a material enhancement in market value reflecting the decided improvement in the company's position.

"Preferred stockholders for their assessment of $10 a share received for every $1,000 paid in, $500 in first mortgage bonds, five shares new preferred and 60 shares new common. So far this year the bonds have advanced from a low of 83 to 93; the preferred stock from a low of 25¾ to 57¼, and the common from a low of 9⅞ to 22½. Present prices are practically the highs to date.

"Common stockholders for their assessment of $5 a share received for every $1,000 paid in $500 in first mortgage bonds, five shares of preferred and 50 shares of common. The result is that on present prices the preferred stockholders have securities valued at $2,070 for every $1,000 paid in assessments and the common stockholders for every $1,000 assessment have securities worth $1,850.

"Since its emergence from receivership the American Writing Paper Company has made rapid strides forward, a welcome change from the discouraging series of annual losses. In four months to June 30, the company earned $1.40 a share on the 90,000 shares of preferred after all charges except federal taxes. With a net quick position of 8.44 to 1, a satisfactory volume of orders on the books, and with efficiency increased throughout the organization, there is solid ground for hope that a new era has dawned for this New England industrial."

Must Pay $60,000 or Sell Mill

[FROM OUR REGULAR CORRESPONDENT]

DENVER, Col., August 26, 1927.—Judge Samuel Johnson, who has heard all the evidence in the suit of Charles B. Myers, the original owner of the Myers Pulp and Paper Company of Denver, and a stock holder and director in the Colorado Pulp and Paper Company, successor to the Myers concern after it was sold at auction, against Joseph Buchhalter the largest stockholder in the Colorado Pulp and Paper Company, ruled on August 25 that the Colorado concern must pay Mr. Buchhalter $60,000 in bonds within six months or the mill must be sold.

Judge Johnson was informed that voluntary and involuntary petitions in bankruptcy now listed in the local Federal District Court will be dismissed. When this is done much pending litigation will have ceased. The present officers of the concern are A. H. Dougall, president; J. P. Karsh, vice president, and Henry Bronstein, secretary. At least this is how the court recognized them, and it is understood that as an opening wedge to carry out the court's order, Mr. Buchhalter was paid $10,000 with interest, at once, and a promise to pay the remaining $50,000 was made. No meeting of the stockholders is permissible until the full amount is paid. If the money is not paid the mill will be sold. Unless Mr. Myers can circumvent the ruling of Judge Adams, it looks like Mr. Buchhalter has been sustained in his handling of the plant and that he has not misappropriated funds as some reports intimated.

C. H. Dexter & Sons, Inc., Build Addition

[FROM OUR REGULAR CORRESPONDENT]

WINDSOR LOCKS, Conn., August 30, 1927.—C. H. Dexter & Sons, Inc., are having a large four story addition built on the upper end of their mill with basement that will be soon ready for use. The top floor will be used for offices and the lower floors for paper manufacturing purposes.

The concern has developed a large business in tissue papers used in condensers for radio battery eliminators and in electric transformers used by telephone companies and others. Recently a new no-tarnish tissue called "Staybrite" for use with silverware has been added. Chemicals are used in this paper that combat the discoloring agencies. It has also added several lines of embossed tissues in white and colors giving a Japanese silk fabric effect.

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Conducted by W.G. MacNAUGHTON, Secretary

Sulphite Cymene*

Para Cymene as a Thinner for Paints, Varnishes and Lacquers

By P. H. Groggins[1]

Para Cymene is obtained as a byproduct in the sulphite pulp industry. It is formed during the digestion of spruce woods by the sulphite liquor, and is blown off, along with other volatile products, with the relief steam from the digesters. When these vapors are cooled and condensed, they yield what is variously known as "spruce turpentine," black liquor or "sulphite turpentine." The appellation turpentine is a misnomer, as the product contains only small amounts of terpenes. The crude material is a dark, oily liquor having a specific gravity of 0.867 at 22.5 deg. C. and when thus obtained possesses a strong odor of sulphur dioxide.

The oily liquor is decanted from the aqueous layer and is then treated with lime, which neutralizes the dissolved sulphur dioxide and combines with other reacting impurities. The crude neutralized liquor is first distilled with steam, which gives a clear colorous distillate. The light upper layer is drawn off and washed with dilute sodium hydroxide to remove the malodorous impurities. After fractional distillation, a product which is practically pure para cymene is obtained.

Para cymene (1 methyl—4 isopropyl benzene) is a colorous aromatic hydrocarbon. Its physical constants as given in the chemical literature are as follows: Freezing point,—73.5 deg. C.; boiling point, 176 to 177 deg. C.; specific gravity, 0.8639 at 15 deg. C.; vapor pressure at 25 deg. C.; 7.15 mm. It is completely miscible with the common organic solvents. It is inflammable, but does not flash at ordinary room temperatures. The flash point as determined in the Color Laboratory with a Tagliabue open cup tester is approximately 100 deg. C. Phillips and Goss [*Chem. & Met. Eng.*, vol. 33, p. 745 (1926)] discovered "that mixtures of para cymene with organic solvents, such as alcohol, acetone, and normal butyl alcohol, are excellent paint and varnish removers." When used alone, however, it is not very effective in such a capacity, having about the same softening action as turpentine. In their tests they observed that "para cymene alone had no effect on varnishes and only a very slight action on paint."

Thinning Agent for Paints and Varnishes

When p-cymene is to be used as a thinning agent in the manufacture of paints and varnishes, it will have to compete against mineral spirits which is the most acceptable low cost thinner. Assuming for the present that it can compete favorable on a cost basis, it is believed that p-cymene possesses qualities which make it more acceptable than mineral spirits. It possesses greater solvent action on resins. Being completely miscible with practically all gums ordinarily used in the trade, it does not throw any of them out on thinning.

Commercial p-cymene is practically a pure chemical, having definite physical constants whereas mineral spirits vary greatly, according to the producer and to the petroleum used.

Ordinary distillations of p-cymene showed the following temperature relations. 200 cc. material were taken in each case.

	Deg. C.	Deg. C.
First drop	173.0	160.0
5 cc.	175.0	173.0
10 cc.	175.0	174.0
50 cc.	175.3	175.0
100 cc.	175.5	175.0
150 cc.	176.0	175.6
175 cc.	177.0	176.0
190 cc.	178.0	177.0
Dry	178.4	179.0

It can be observed from the preceding results that approximately 80 per cent will come over between 175 to 177 deg. C.

Thinner for Lacquers

P-cymene is thrown into competition with toluene as a thinner for the preparation of lacquers derived from cellulose esters. This of course is a more lucrative field for this byproduct. P-cymene is not only miscible with the usual solvents for nitrocotton (butyl acetate, ethylene glycol and amyl acetate), but is also a solvent for the resins which are incorporated in brushing lacquers. Toluene has a lower boiling point (111 deg. C) and consequently a faster rate of evaporation than p-cymene, but appears to suffer no further by comparison. No distinction could be observed in our tests between the relative miscibility of toluene and cymene with resins. Whether the greater volatility of toluene will tend towards a blistering effect on undercoats should prove an interesting investigation for industrial laboratories.

No Substantial Demand at Present

At present there is no substantial demand for this byproduct, and consequently few plants have made the necessary installation to effect its recovery. In 1909 the engineering laboratories of the University of Wisconsin attempted to use it as a fuel for internal combustion engines. Innumerable other investigations have followed this pioneer work. The production of toluene from cymene was attempted by several investigators [Moore and Egloff, *Met. Chem. Eng.*, vol. 17, p 66 (1917); Schorger, *J. Am. Chem. Soc.*, vol. 39, p 2671 (1917)], but the yields thus far obtained would not justify commercial exploitation, except possibly in cases of na-

* Chem. and Met. Eng., Vol. 34, No. 5, May, 1927. (Abstracted.)

[1] Associate Chemist, Color Laboratory, Bureau of Chemistry, U. S. Dept. of Agriculture, Washington, D. C.

tional emergencies arising from a state of war. A large number of interesting syntheses have been effected from p-cymene; one of particular interest is that of carvacrol (U. S. Patent 1,449,121 granted R. H. McKee). These, however, have proved to have little more than academic interest. In 1918 Dr. C. H. Herty [*Ind. Eng. Chem.*, vol. 10, p 1. (1918)], writing editorially in the *Journal of Industrial and Engineering Chemistry*, stated that from 1,500,000 to 2,000,000 gallons of spruce turpentine were going to waste annually in the United States and Canada. Realizing the magnitude of this economic waste, he deplored the fact that no profitable demand for it had yet been found. Almost ten years has elapsed since that writing, and today almost the same situation confronts the manufacturers of sulphite pulp.

Potential Supply

According to statistics of the United States Department of Commerce, 3,071,361 cords of domestic and imported spruce woods was treated in this country during the year 1924, from which it is estimated that a yield of 1,400,000 tons of pulp was obtained. Authorities differ as to the possible yield of p-cymene per ton of pulp. The figures range from 0.36 to 1 gallon. Assuming that the recovery is 0.6 gallon, the possible annual production of this by-product in the United States alone would be about 850,000 gallons. The Canadian mills should, according to estimates, be able to augment this production by almost 500,000 gallons, thus making possible a total annual production of 1,300,000 gallons. This is only a small fraction of the paint and varnish thinner requirements of this country, as 7,500,000 gallons of turpentine alone was used, to which must be added several times as much mineral spirits.

Two factors are involved in the commercial aspects of the problem: (1) The installation of equipment necessary to recover and purify the crude oily liquor, and thus insure to the paint and varnish industry a definite supply of p-cymene; (2) the organization of producers into groups to make possible such a low cost of production that p-cymene can compete with mineral spirits in paints and varnishes and with toluene as a lacquer thinner.

Recovery of Sulphite Turpentine

It is manifest that the first move towards developing an industry, for the recovery of this economic waste must come from the paint and varnish industry. All expenditures in this direction would be predicated upon the approval and acceptance of p-cymene as a paint and varnish thinner. The assurance of a definite market and the probability of tangible returns on investments made will encourage the mill operators to make a small initial expenditure. This will provide for the installation of atmospheric or surface condensers to simply condense and recover the cymene-bearing relief gases. No great engineering skill is required for the installation of such apparatus. The condensate comprises, in addition to the suplhite turpentine, a large quantity of water containing a number of dissolved substances. This condensate is led to vats where it is treated with lime and stored until a sufficient quantity is on hand. The lighter p-cymene liquor rises to the top and can be periodically decanted or syphoned off. It can then be loaded into tank cars for delivery to a central rectifying plant. Specifications may be drawn up for the crude product, so that each mill can be credited for its deliveries at a definite price or on a co-operative basis.

The Rectifying Plant

The rectifying plant would include tanks for raw liquor, process material and refined p-cymene. A continuous column still can be utilized to steam-distill the crude oil. The p-cymene is decanted from the clear distillate. It is then thoroughly washed with dilute sodium hydroxide and subjected to fractional distillation without steam. The caustic soda solution may be used over and over in order to minimize the expense of purification. The p-cymene thus obtained has the physical constants previously noted. These constants may serve as a basis for establishing specifications for this material as a thinning agent.

From the foregoing description of the plant required for the preparation of p-cymene, it is evident that its production technique is simple. In fact, it is more easily accomplished than the treating of petroleum for mineral spirits. Such an installation requires only meagre supervision and yet works satisfactorily. It is furthermore highly probable that some of the larger manufacturers of paper pulp have existing plants in which they can not only recover their own p-cymene, but can also receive outside material for purification.

Purification of Product

It is apparent that the operating cost of condensing the relief vapors should be practically negligible. Only a moderate investment is required for vats to store the crude "sulphite turpentine." The erection of a rectifying plant will involve the expenditure of a sum which in the business world may be considered a substantial investment. When it is realized, however, that a single distillation plant can serve a large number of mills, such a co-operative undertaking presents no serious obstacles. It is estimated that three rectifying plants, located at strategic points, can readily purify the American production while operating on a day shift only.

Laboratory tests have shown that it is possible to obtain a yield of at least 85 per cent on the steam distillation of the crude oil, and a yield of 97.5 per cent on the final rectification. They also show that less than 4 parts of steam are needed to effect the steam distillation, whereas 1.5 parts would be required during the rectification, if it is accomplished with high-pressure steam as a heating medium. The use of fuel oil as a source of direct heat during the final distillation should lower this item of expense.

It is now possible to calculate the steam requirements and to compute its cost per unit of p-cymene produced. To be conservative, it is assumed that 6 parts of steam are required for 1 part of pure marketable product. On this basis 100 gallons (714 lbs.) of para cymene will require 4,284 pounds of steam. When this is introduced at 40 cents per 1,000 pounds, its cost per 100 gallons of finished product is $1.71. This is probably the largest item in operating expense. It would be futile to attempt to give any accurate figures for the net cost of production without exact knowledge regarding the layout of the plant and its productive capacity, but for the sake of inviting comment the followtng estimates, expressed in cents per gallon, are tabulated:

Steam and other power	3.0
Lime	1.0
Caustic soda	1.0
Direct labor and supervision	2.0
Overhead, interest on investment and depreciation	3.0
Total	10.0

Market Will Justify Recovery

Para cymene has been found to be a satisfactory thinner in the preparation of paints, varnishes and lacquers. Until now it has been a waste product of the sulphite pulp industry in the treatment of spruce woods. It is believed that the market opened by the discovery of its usefulness as a paint and varnish thinner will justify the installation of equipment to effect its recovery.

Large Capacity Dorr Thickener

An example of engineering progress and success in building large equipment to meet the increasing tonnage requirements of modern industry has come to light in the purchase recently of the largest Dorr thickener ever built. This Dorr thickener, which is of the traction type, is 325 feet in diameter, and some conception of its size may be obtained when it is realized that it will provide almost two acres of settling area.

This unit will be used at the copper flotation plant of the Miami Copper Company, Miami, Arizona, for dewatering 16,000 tons of mill tailings and recovering for reuse in the plant about 11,500,000 gallons of water per day. This Dorr thickener has more than twice the capacity of any thickener built before. With the exception of certain improvements, the design closely follows that of the 200 foot units at Inspiration Copper Company, which have been operating several years in this district.

Bituminous Waterproof and Roofing Materials

Report of A. S. T. M. Committee

This information is published in reference to the work on standardization of paper testing methods by the Paper Testing Committee, Technical Association of the Pulp and Paper Industry. Attention is directed to the use of the dot method of counting fibers which is a tentative method of the Technical Association of the Pulp and Paper Industry.

B. W. SCRIBNER, Chairman,
Paper Testing Committee, T. A. P. P. I.

Committee D-8 has held three meetings during the past year. One new method of test has been prepared for recommendation to the Society and one standard specification and one tentative specification have been slightly revised. Nine tentative specifications and three tentative methods of test are recommended for advancement to standard.

PROPOSED WITHDRAWAL OF EXISTING TENTATIVE SPECIFICATIONS AND METHOD OF TEST

After a great deal of work on the part of the Sub-Committee on Specifications for Bituminous Coatings for Cold Application and a careful investigation of the demand for specifications for such products, Committee D-8 has come to the conclusion that at the present time it is inadvisable to continue its efforts along this line and upon its own suggestion the sub-committee has been discharged.

In its last annual report as originally prepared, Committee D-8 presented eight tentative specifications and two tentative methods of test for materials for cold application, but owing to serious criticisms received finally recommended only two of these specifications and one method of test for acceptance by the Society. Since then it has become increasingly evident that most cold application materials are sold in small packages to consumers who are not interested in detailed specifications. These products are in general satisfactory for the purpose intended but vary so widely in composition as to make it impracticable to prepare acceptable standard specifications which will not describe some existing trade products and eliminate others equally as satisfactory.

For these reasons Committee D-8 recommends the withdrawal of the following tentative specifications which were accepted by the Society in 1926:

1. Tentative Specifications for Light-Body Coal-Tar or Water-Gas-Tar Protective Coating with Solvent Vehicle, for Cold Application for Damp-Proofing Masonry Structures (D 253-26 T);[1]
2. Tentative Specifications for Heavy Body Coal-Tar or Water-Gas-Tar Protective Coating with Solvent Vehicle, for Cold Application, for Damp-Proofing Masonry Structures (D 254-26 T);[2]

PROPOSED REVISION OF EXISTING STANDARD SPECIFICATIONS

Standard Specifications for Woven Cotton Fabrics Saturated with Bituminous Substances for Use in Waterproofing (D 173-25).[4]—The attention of the committee has been called to the fact that in these specifications no indication is given of allowance for sizing present in all commercial cotton fabrics. The following revision in this standard is accordingly recommended:

Section 4 (c).—To this section, reading as follows, add a footnote as indicated.

"(c) The fabric shall be composed of not less than 100 per cent * of cotton fibers."

It is recommended that this revision be incorporated in the present standard specifications without publication as tentative. The committee accordingly asks for the necessary nine-tenths vote for the adoption of this revision as standard immediately.

* This shall not exclude the presence of the customary sizing materials not exceeding 8 per cent by weight of the moisture-free cotton.

PROPOSED REVISION AND ADVANCEMENT TO STANDARD OF EXISTING TENTATIVE SPECIFICATIONS

Tentative Specifications for Asphalt-Saturated Asbestos Felt for Use in Constructing Built-Up Roofs (D 250-26 T)[5].—Because the requirements are believed to be unnecessary it is recommended that the following sections be deleted from these specifications, renumbering the succeeding sections accordingly:

Section 7 (g).—Average Breaking Strength.—With the fiber grain 25 lb., across the fiber grain 13 lb.

Section 8 (b).—The thickness of Desaturated Felt.—Minimum, 0.020 in.

It is recommended that these specifications as revised be advanced to standard.

PROPOSED ADVANCEMENT TO STANDARD OF EXISTING TENTATIVE SPECIFICATIONS AND METHODS OF TEST

No serious criticisms having been received on the following tentative specifications and methods of test, the committee recommends that they be advanced to standard:

1. Specifications for Asphalt Roll-Roofing Surfaced with Powdered Talc (D 224-26 T);[6]
2. Specifications for Slate-Surfaced Asphalt Roll-Roofing and Slate-Surfaced Asphalt Shingles (D 225-26 T);[6]
3. Specifications for Asphalt Roll-Roofing Surfaced with Granular Talc (D 248-26 T);[6]
4. Specifications for Heavy Weight Slate-Surfaced Asphalt Roll-Roofing and Heavy Weight Slate-Surfaced Asphalt Shingles (D 249-26 T);[6]
5. Specifications for Asphalt-Saturated Roofing Felt for Use in Waterproofing and in Constructing Built-Up Roofs (D 226-26 T);[6]
6. Specifications for Coal-Tar Saturated Roofing Felt for Use in Waterproofing and in Constructing Built-Up Roofs (D 227-26 T);[6]
7. Specifications for High-Carbon Coal-Tar Pitch for Use in Constructing Built-Up Roofs Surfaced with Slag or Gravel (D 251-26 T);[6]
8. Specifications for High-Bitumen Coal-Tar Pitch For Use in Constructing Built-Up Roofs Surfaced with Slag or Gravel (D 252-26 T);[6]
9. Methods of Testing Felted or Woven Fabrics Saturated with Bituminous Substances for Use in Waterproofing and Roofing (D 146-26 T);[6]
10. Methods of Testing Bituminous Mastics, Grouts and Like Mixtures (D 147-25 T);[7]
11. Methods of Testing Asphalt Roll-Roofing Surfaced with Fine or Granular Talc, Slate-Surfaced Asphalt Roll Roofing and Slate-Surfaced Asphalt Shingles (D 228-26 T).[6]

NEW METHOD OF TEST SUBMITTED AS TENTATIVE

In its 1926 report, the A. S. T. M. committee on Bituminous Waterproofing and Roofing Materials recommended that the

[1] Proceedings, Am. Soc. Testing Mats., Vol. 26, Part I, p. 979 (1926); also 1926 Book of A. S. T. M. Tentative Standards, p. 759.
[2] Proceedings, Am. Soc. Testing Mats., Vol. 26, Part I, p. 981 (1926); also 1926 Book of A. S. T. M. Tentative Standards, p. 761.
[3] Proceedings, Am. Soc. Testing Mats., Vol. 26, Part I, p. 998 (1926); also 1926 Book of A. S. T. M. Tentative Standards, p. 784.
[4] A. S. T. M. Standards Adopted in 1925.
[5] Proceedings, Am. Soc. Testing Mats., Vol. 26, Part I, p. 972 (1926); also 1926 Book of A. S. T. M. Tentative Standards, p. 752.
[6] Proceedings, Am. Soc. Testing Mats., Vol. 26, Part I, pp. 948-1000 (1926); also 1926 Book of A. S. T. M. Tentative Standards, pp. 726-786.
[7] Proceedings, Am. Soc. Testing Mats., Vol. 25, Part I, p. 786 (1925); also 1926 Book of A. S. T. M. Tentative Standards, p. 772.

method of determining fiber composition appearing as Section 23 of Tentative Methods D 146-25 T be eliminated because it was not sufficiently accurate. A new sub-committee was appointed to prepare a satisfactory method for this determination and during the past year this sub-committee has developed the new method appended hereto entitled Tentative Method of Analysis of Roofing Felt for Fiber Composition, which the committee recommends for publication as tentative.

The results of collaborative work on this new method by a number of laboratories is published as an appendix to this report as it is believed that they will be of considerable value to all who are interested in the method and establish a basis for the committee's recommendation.

PREVOST HUBBARD, *Secretary.* S. T. WAGNER, *Chairman.*

Report of Special Sub-Committee on Cooperative Tests on Analysis of Roofing Felt for Fiber Composition

Four average samples of roofing felt were sent by the U. S. Bureau of Standards to a number of laboratories of members of Committee D-8 who signified their desire to participate in the cooperative tests to determine the fiber composition of roofing felts. The samples of felt were made at the Bureau for another purpose and in a very rough way their composition was known.

Eleven sets of results using the dot method of counting prescribed in the proposed Tentative Method of Analysis of Roofing Felt for Fiber Composition have been received. Two laboratories reported results by the old estimation method. One laboratory made no separation of mechanical wood, jute and manila and its results have been omitted. Two laboratories have not yet reported although they advise that the work is in progress.

TABLE 1
RESULTS REPORTED BY LABORATORIES USING THE DOT METHOD

SAMPLE A

	Supposed composition	Average found	Weighted average found
Rag, %	10	12.5	10.3
Mixed papers and sawdust, %	30	37.1	36.7
Bagging, %	60	49.9	53.0

Laboratory	Wool %	Cotton, linen, etc. %	Chemical wood %	Mechanical wood %	Jute, manila %	Unidentified fibers %
A-1	0	8	11	13	68*	0
A-2	trace	10	10	12	68*	0
B	0.6	10.7	15.2	23.5*	49.0	1.0
C	1.6	7.5	24.3	14.0	50.8	1.8
D	5.0*	10.0	25.0	15.0	45.0	0
E	1.0	10.0	17.0	21.0*	51.0	0
F	6.1*	10.3	19.2	10.0	54.4	0
G-1	14.0*	15.0*	24.0	13.0	32.0*	2.0
G-2	0	10.0	25.0	15.0	50.0	0
H	0	9.0	32.0*	28.0*	31.0*	0
I	trace	10.0	16.0	25.0*	49.0	0
Average of all results	2.5	10.0	19.9	17.2	49.9	0.5
Weighted average	0.3	10.0	22.9	13.8	53.0	0
Variation in accepted results	0-1.6	7.5-10.7	10-25.0	12-15	45.0-54.4	
Max. variation from average	±1.1	±2.7	±11.1	±2.2	±9.0	

An asterisk (*) indicates that the value has been omitted in the weighted average.

SAMPLE B

	Supposed composition	Average found	Weighted average found
Rag, %	50	44.8	47.2
Mixed papers and sawdust, %	50	48.1	50.1
Bagging, %	..	6.5	2.7

Laboratory	Wool %	Cotton, linen, etc. %	Chemical wood %	Mechanical wood %	Jute, manila %	Unidentified fibers %
A-1	3.0	42.0	15.0*	40.0*	trace	0
A-2	trace*	45.0	20.0	30.0	4.0	0
B	3.7	42.6	18.6	30.8	2.3	2.0
C	3.1	23.3*	39.1*	24.0	7.2*	3.3
D	10.0*	35.0*	20.0	25.0	10.0*	0
E	4.0	43.0	20.0	30.0	3.0	0
F	3.6	44.5	24.5	10.1*	17.3*	0
G-1	6.0	40.0	25.0	8.0*	20.0*	1.0
G-2	0*	51.0*	25.0	24.0	0	0
H	0*	44.0	23.0	30.0	3.0	0
I	trace*	49.0*	27.0*	20.0*	4.0	0
Average of all results	3.0	41.8	23.4	24.7	6.5	0.6
Weighted average	3.9	43.3	22.2	27.9	2.7	
Variation in accepted results	3.0-6.0	40-45	18.6-25.0	24-30.8	0.4	
Max. variation from average	±2	±3.5	±3.8	±4.1	±2	

An asterisk (*) indicates that the value has been omitted in the weighted average.

SAMPLE C

	Supposed composition	Average found	Weighted average found
Rag, %	60	46.8	50.8
Mixed papers and sawdust, %	25	34.0	31.7
Bagging, %	15	19.8	17.5

Laboratory	Wool %	Cotton, linen, etc. %	Chemical wood %	Mechanical wood %	Jute, manila %	Unidentified fibers %
A-1	trace*	51.0	11.0	23.0	15.0	0
A-2	5.0	50.0	6.0*	16.0	23.0	0
B	6.6	52.7	9.0	19.0	11.3*	1.4
C	3.8	46.8	15.3	16.1	15.3	2.7
D	0*	25.0*	15.0	40.0*	20.0	0
E	5.0	40.0	14.0	24.0	17.0	0
F	0*	41.9	19.5*	15.1	23.5	0
G-1	7.0	42.0	22.0*	2.0*	27.0*	0
G-2	0*	50.0	14.0	16.0	20.0	0
H	0*	41.0	16.0	26.0	17.0	0
I	0*	46.0	12.0	23.0	19.0	0
Average of all results	2.5	44.3	14.0	20.0	19.8	0.4
Weighted average	5.3	45.5	12.7	19.0	17.5	
Variation in accepted results	3.8-7.0	40.0-52.7	9.0-16.0	15.1-26.0	15.0-23.5	
Max. variation from average	±2	±7.9	±4.0	±7.2	±5.1	

An asterisk (*) indicates that the value has been omitted in the weighted average.

SAMPLE D

	Supposed composition	Average found	Weighted average found
Rag, %	10	11.8	10.3
Mixed papers and sawdust, %	90	75.4	86.3
Bagging, %	0	12.5	3.4

Laboratory	Wool %	Cotton, linen, etc. %	Chemical wood %	Mechanical wood %	Jute, manila %	Unidentified fibers %
A-1	0	8.0	26.0*	66.0*	0	0
A-2	1.0	14.0	29.0	58.0	0	0
B	0.9	7.3	39.3	35.5	15.0*	1.8
C	0.8	5.2	46.9*	34.2	11.0	1.9
D	0	25.0*	0*	25.0*	50.0*	0
E	1.0	7.0	30.0	61.0	1.0	0
F	8.9*	10.5	34.7	27.7*	18.2*	0
G-1	1.0	12.0	40.0	15.0*	32.0*	0
G-2	0	12.0	37.0	40.0	11.0	0
H	0	7.0	34.0	59.0	0	0
I	0	9.0	36.0	55.0	trace	0
Average of all results	1.1	10.7	32.1	43.3	12.5	0.3
Weighted average	0.3	10.0	33.5	52.8	3.4	
Variation in accepted results	0-1.0	5.2-14.0	29.0-40.0	34.2-61.0	0-11.0	
Max. variation from average	±0.6	±5.0	±6.5	±18.3	±6.6	

An asterisk (*) indicates that the value has been omitted in the weighted average.

Table 1 gives results on each sample as reported by the eleven laboratories using the dot method, showing first the results of all tests reported, then an average of all results received, and finally a weighted average in which all figures against which an asterisk appears have been omitted. In the case of each felt a comparison is given of the supposed composition with the general average and the weighted average.

For the sake of completeness the two results received on the estimation method are also included and appear in Table 2.

TABLE 2
RESULTS REPORTED BY LABORATORIES USING THE ESTIMATION METHOD

Material	Sample A Laboratory J	Sample A Laboratory K	Sample B Laboratory J	Sample B Laboratory K	Sample C Laboratory J	Sample C Laboratory K	Sample D Laboratory J	Sample D Laboratory K
Wool, %	0	0	5.0	0	5.0	0	0	0
Cotton, linen, etc., %	10	0	45.0	50.0	60	70	10	0
Chemical wood, %	15	13	15	15	5	2	20	25
Mechanical wood, %	30	30	35	25	15	15	70	65
Jute and manila, %	45	57	0	10	15	13	0	10

Comments:

The chairman of the special sub-committee has reviewed the results and believes that the correspondence of the weighted averages with the supposed compositions justifies the selection of results.

It seems reasonable that the differences in results obtained are to a considerable extent due to inexperience in the recognition of fibers. Of the 60 rejected figures out of a total of 220, 21 are from two sets of determinations while 40 are from 5 sets. The other 6 laboratories are in general reasonably concordant throughout, that is, A-2, B, C, E, G-2 and I (A-1 and 2 and G-1 and 2

represent two different laboratories of a single organization). Some of the differences are of course due to sampling which is very difficult in materials of this type. The variations in general, however, are materially less in the accepted results than has been experienced with the methods generally used in th past. Further cooperative tests are to be carried out to perfect the technique of operation and it is hoped that considerably greater concordance can be obtained than was done in this preliminary set of results.

Respectfully submitted on behalf of the committee,

J. M. WEISS, *Chairman.*
H. ABRAHAM
C. E. LIBBY
O. G. STRIETER.

Proposed Tentative Methods of Analysis of Roofing Felt for Fiber Composition[1]

Serial Designation: D 272-27 T

This is a *Tentative Standard* only, published for the purpose of eliciting criticism and suggestions. It is not a Standard of the Society and is subject to annual revision.

ISSUED, 1927

1. These methods cover the examination of roofing felt to determine the percentage of various fibers contained therein.

Sampling

2. (*a*) From a shipment of rolls of felt to be tested representing a product of the same kind, class, and weight, a number of rolls shall be selected at random, equivalent to one-half the cube root of the total number of rolls in the lot, except that in lots of 1,000 or less, 5 rolls shall be taken. From each roll a sample 1 in. in width across the width of the roll shall be taken from the first unharmed layer of the roll. The strips shall then be reduced in the laboratory to a sample of about 25 grams by cutting at least 100 small sections from different portions of the various strips taken for test.

(*b*) If the sample to be examined is an extracted felt obtained from the examination of a saturated felt or prepared roofing, the sample of 25 grams shall be obtained by cutting at least 100 small sections from different portions of the extracted felt obtained from the saturated felt or prepared roofing.

Apparatus

3. (*a*) *Microscope.*—The microscope shall be capable of giving a magnification of not less than 100 diameters and shall be of the compound type, provided with a mechanical stage, and substage condenser.

(*b*) *Graticule.*—The graticule or cross-line disk, for insertion into the eye-piece of the microscope, shall be ruled with two fine lines intersecting approximately at right angles.

(*c*) *Dropper.*—The dropper shall consist of a glass tube 20 cm. in length and 6 mm. in internal diameter fitted at one end with a rubber bulb and having the other end carefully smoothed but not constricted in a flame.

Herzberg Stain

4. *Herzberg Stain.*—The Herzberg stain used shall be prepared as follows:

Solution A.—Dissolve 50 grams of dry zinc chloride (fused sticks) in 25 cc. of distilled water, added to the zinc chloride bottle with a pipette. Stopper the bottle and shake well. There should be approximately 40 cc. of the solution.

The specific gravity of the solution determined at 28 degrees C. shall be 1.8. If the specific gravity is not 1.8, add distilled water until the specific gravity is 1.8, and then pour the solution into a tall cylinder.

Solution B.—Wash the thermometer, hydrometer, and the original bottle containing the zinc chloride with a portion of 12.5 cc. of distilled water. Add this to Solution *A* in the tall cylinder.

Dissolve 5.25 grams of potassium iodide and 0.25 grams of iodine in the balance of the 12.5 cc. of distilled water, and add to Solution *A* in the tall cylinder.

Stir the solution in the tall cylinder well, and place in the dark. The following day, pipette off the clear portion into a black bottle, leaving 3 or 4 cc. of the solution above the sediment. Add a leaf of crystal iodine.

This stain should ordinarily be found to be satisfactory for at least two weeks. If for any reason the stain is unsatisfactory, it shall not be adjusted but new stain shall be prepared. On referee tests no stain over seven days old shall be used.

Preparation of Sample

5. Ten grams of the sample shall be treated in a 400-cc. beaker with 200 cc. of NaOH solution (0.5 per cent) and heated to boiling. Stir the liquid thoroughly, preferably with a mechanical stirrer, until the sample is well pulped and the fibers well separated. The mass shall then be placed on a No. 100 (149 micron) sieve and washed thoroughly with water. The moist mass of paper retained on the sieve shall then be rolled into a ball and worked between the fingers to loosen the fibers thoroughly. Approximately one-fourth of this sample shall then be placed in a stoppered bottle and shaken thoroughly with 250 cc. of water until the fiber mass is thoroughly disintegrated and separated. Transfer about 25 cc. of this suspension to another bottle and dilute with water to 250 cc., so as to obtain a suspension of about 0.1 per cent pulp. This suspension shall be thoroughly shaken before withdrawing a sample for the microscope test described in Section 6.

Procedure

6. The fibers shall be transferred from the 0.1 per cent pulp suspension to the microscopic slide as follows: Thoroughly mix the fibers and water by shaking thoroughly, quickly insert the dropper into the mixture 5 cm. (2 in.) below the surface, expel two bubbles of air from the dropper, then fill the tube to a distance of about 13 mm. (½ in.). Transfer the contents of the dropper to the slide, making four drops, completely emptying it. Repeat this procedure until the slide is uniformly covered with drops of the suspension, then place the slide in an air-bath until dry. Add stain to the slide by means of an ordinary dropper so as to uniformly cover the fibers with the stain. Allow to stand for 2 minutes, remove most of the excess stain with hard, clean-cut filter paper and press down a second slide or suitable cover glasses on the fibers. Remove the remaining excess of stain with absorbent paper.

7. Place the round-glass graticule on the diaphragm of the microscope. The point formed by the intersection of the two fine lines ruled on the graticule shall be used as the eye-piece reference point. Starting at one side of the slide about one-fourth of the way from the top, the slide shall be moved in a straight line across its entire width, by means of the mechanical stage. In moving thus through the field of view, each fiber or part of a fiber shall be counted which touches the eye-piece reference point. Some of the fibers may be long and come under the point twice or more, but they shall be counted each time. If aggregations of fibers, such as occur in ground wood, are encountered, the number of single fibers in the aggregation shall be estimated and figured as if the individual fibers were completely separated. Another path across the slide shall be selected, about half way down from the top. The entire counting process shall be repeated and the results added to those obtained above. Repeat again over a path about three-fourths of the way down from the top and add the results to the total as before. Select two or more up-and-down paths and repeat the process. In this manner not less than 200 fibers shall be counted on each slide, depending upon the thickness of fibers on the slide. An examination of three such slides, involving the counting of not less than 600 fibers, shall constitute a test.

The fibers may be recognized (Note 3) by the colors developed

[1] Criticisms of these Tentative Methods are solicited and should be directed to Mr. Prévost Hubbard, Secretary of Committee D-8 on Bituminous Waterproofing and Roofing Materials, 441 Lexington Ave., New York City.

by the stain, and by the surface appearance and markings on the fibers themselves.

Color	Fiber composition
Red	Linen, cotton, bleached Manila hemp.
Blue	Chemically prepared fibers from wood, straw, and esparto.
Yellow (various shades to brown)	Ground wood, sawdust, jute, and Manila (Note 1).
Colorless	Wool (Note 2).

Notes

Note 1.—Ground wood and sawdust (mechanical wood) may be distinguished from jute and manila by the broken ends of the fibers, round, circular pits on the surface of the fibers as well as ray-like structure of portions of certain of the woods.

Note 2.—Wool fibers are also often variously colored from the dye to which the wool has been subjected prior to its use as a raw material for roofing felts and in such cases must be recognized by its regular cylindrical appearance, scale, and hook-like markings.

Note 3.—Proficiency and experience in recognizing the appearance and structure of the various fibers are essential for accurate testing. It is recommended that all operators carrying on the tests obtain *Technologic Paper No. 250,* of the Bureau of Standards, entitled "Pulp and Paper Fiber Composition Standards," which contains color plates of various fibers treated with the Herzberg stain. A study of these plates, together with preparation of slides from known materials, is necessary to familiarize the operator with the characteristics of the various fibers and thereby perfect his technique.

8. The proportion of fibers found shall be reported in terms of percentage by counts of the total fiber composition and the following classes reported:

1.	Cotton, linen, and bleached Manila hemp	.....
2.	Chemical wood, straw, and esparto	.....
3.	Mechanical wood	.....
4.	Jute, and Manila	.....
5.	Wool	.....
6.	Unidentified fibers	.....

TAPPI Program at Chemical Exposition

The program for the meeting of the Technical Association of the Pulp and Paper Industry at the eleventh exposition of the chemical industries will be presented on Wednesday afternoon, September 28 at 2 o'clock in the conference room of the Exposition. The program will comprise a series of ten minute addresses and will be under the chairmanship of E. C. Tucker, president of the association.

The addresses are as follows:

1. Pulp Washers and Stock Saverss
   (a) United Filters—R. C. Campbell
   (b) Oliver Continuous Filter—Charles Fuhrmeister, Jr.
   (c) Vallez Rotary Filters—A. H. Vallez
2. Hydrogen Ion Control in Pulp and Paper Mills:
   LaMotte Chemical Products Company.—W. A. Taylor
3. Evaporation in Chemical Pulp Mills:
   Ernest Scott & Co.—H. Auston
4. Chromium Plating in The Paper Industry:
   Chromium Corporation of America—Hugh D. McLeese
5. Dorr Equipment in Pulp and Paper Mills:
   Dorr Company—A. Anable
6. Smelting Furnace Lining:
   Alberene Stone Company—G. O. Bryant
7. Daylight Illumination for Labortories and Mills and Displays:
   Sunlight Illuminating Company—Walter N. Polakov
8. Microscopical Examination of Pulp and Paper:
   Paper Structure and a New Form of Illumination—L. C. Foster, Bausch & Lomb
9. Continuous Centrifugal for Pulp and Paper:
   Illustrated with motion pictures
   Laughlin Filter Comapny—W. C. Laughlin
10. Minerals for Paper Use:
    Available Deposits Located in Territory Tributary to Southern Pacific Railway—C. M. Redfern

Primitive Papermaking

The private press of Dard Hunter, Chillicothe, Ohio, announces "Primitive Papermaking" by Dard Hunter, being an account of a Mexican sojourn and of a voyage to the Pacific Islands in search of information, implements and specimens relating to the making and decorating of bark paper.

This book deals with the papers that are beaten directly into sheets from the bark of trees, and does not enter into the more sophisticated hand-moulded papers of civilized races. The bark-papers that are treated in this volume are used mostly for clothing and in religious ceremonies and do not include any material that is made for commerce.

The frontispiece is a reproduction of a lithograph of 1852 of the Mountain House, where the book was compiled and printed. The foreword sets forth, for the first time, a brief account of the cutting and casting of the type that was used in printing the volumes. The punches, matrices, molds, and tools employed by Dard Hunter in making this type are now in the Smithsonian Institution at Washington, D. C.

There are thirty-six illustrations in the text, all drawn by Dard Hunter from primitive papermaking tools and appliances in his collection. The other illustrations include ten original photographs on special paper depicting aboriginal papermaking. There are two actual specimens of paper-mulberry bark from Tongatabu and Java and more than twenty actual examples of primitive bark-papers which have been gathered by Dard Hunter in various parts of the world. These include bark-papers made by the Otomi Indians of Mexico for religious ceremonies; rare deloewang specimens from Java; ancient watermarked examples from Hawaii; taloa and kuvui specimens from Taviuni, Fiji Islands; plain and kupesi-marked pieces from Tongatabu and Vavau of the Tonga Islands; beautifully decorated specimens from Savaii of the Samoan Islands; examples from the Uvea group, and the plain hoopai-marked varieties from the Marquesas and Austral Islands. These actual specimens, some of which are hundreds of years old are tipped in each volume, forming a veritable museum.

Aside from the actual bark-papers, there are eight facsimiles executed by Dard Hunter, which are faithful to the originals in design, color, and texture. These embrace specimens made by the Indians of Panama and Peru and by the natives of Hawaii, Tahiti, Northeast Borneo, New Hebrides, Middle-Celebes, and the Horne Islands.

Owing to the methods used in producing this book the edition is necessarily limited. Two hundred copies have been printed, all of which are numbered and signed.

Copies will not be given for review and no discount is allowed to libraries, museums, or booksellers. Books are not sent on approval, but any volume purchased from Dard Hunter's private press may be returned and the original price refunded, no matter how long the purchaser may retain the book. (Copies of Old Papermaking, published in 1923, now bring from three to four times the original price.)

Primitive Papermaking is enclosed in a heavy, hand-made portfolio with linen ties. In this way each sheet may be examined separately. Printed in the hand-cut and hand-cast type in black and Tonga brown. The paper was made especially for this book and is natural-toned, hand-made, each sheet bearing the bull's head and branch watermark. The book is a folio, measuring 17 x 12½ inches, weight seven pounds.

The original price of $75.00 the copy prevails and orders will be accepted for the remaining volumes.

1928 TAPPI Fall Meeting

The fall meeting of the Technical Association of the Pulp and Paper Industry will be held this year at Middletown, Ohio, October 5, 6 and 7. Convention headquarters will be the Manchester Hotel and Arthur R. Harvey, of Gardner & Harvey Company, is in charge of local arrangements.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Alkaline Processes

Utilization of Lime Sludge. John S. Bates. Pulp and Paper International No. 137-139 (Feb., 1927). The green liquor obtained from the black ash in sulphate liquor recovery is allowed to stand hot for about 6 hours to allow the black, slimy, semi-colloidal, insoluble impurities (mostly iron sulphide) to settle out. The clear liquor is decanted and the alkali remaining in the dregs recovered by washing and decantation. The advantages are: purified green liquor facilitates causticizing because there is no slimy iron sulphide to coat the lumps of lime and retard or prevent its action with the sodium carbonate; less lime is needed because it is more efficiently and completely utilized; settling of the lime sludge is more rapid and more thorough, thereby increasing the capacity of the cauticizing plant and simplifying the washing of the sludge; there is less trouble with batches of overburnt and impure lime, which are met with at times; absence of the slimy insolubles facilitates the recovery of alkali from the sludge by washing. This purified lime sludge is eminently suitable for use instead of ordinary lime in a milk-of-lime system for making sulphite acid liquor; chemically the reaction is the same as that of lime stone in the tower system, and mechanically the suspension is handled in the same way as in the milk-of-lime system. The advantages are: no heat is generated in mixing it with water and it can therefore be fed to the absorption tower at a lower temperature than milk of lime; less heat is generated by absorption of sulphur dioxide than with milk of lime; but the previous factors allow of better absorption of relief gas from the digesters and allows more margin against losses of gas in warm weather; no trouble is encountered due to tendency to form insoluble calcium monosulphite, which frequently plugs the holes in the tower plates when milk of lime is used. Possible objections that might be raised to the use of kraft lime sludge have proved so insignificant in practice that they may be considered negligible. The lime sludge is also suitable as high-grade agricultural lime. The strength of the thin lime-sludge suspension going to the sulphite acid tower can be controlled by diluting a known amount with hot water, adding excess of standard acid, and titrating the excess with standard alkali in presence of phenolphthalein.—A.P.-C.

Destructive Decomposition of Cellulose Waste Liquors. J. H. Wallin. U. S. pat. 1,608,075, Nov. 23, 1926.—Organic substances such as pulp waste liquor, tar, phenols, wood, straw, grass, leaves, peat, brown coal, fish refuse, etc., are heated under pressure with a solution of caustic alkali which is used in sufficient excess to react with all acids formed during the process; a temperature of 250 degrees C. or higher and a pressure of between 40 and 500 atmospheres are used, to form alcohols, aldehydes, acids, oils, ketones, amines, ammonia, etc.—A.P.-C.

Treatment of Black Liquor. L. Bradley and E. P. McKeefe assignors to Bradley-McKeefe Corporation. U. S. pat. 1,606,338, Nov. 9, 1926. Black liquor is concentrated and organic matter is simultaneously precipitated from it by bringing the liquor into contact with hot gases containing carbon dioxide or other reagent for effecting the precipitation of the organic substances.—A.P.-C.

Mechanical Processes

American Methods for the Production of Newsprint. I. Kolotilow, I. Chramzow and A. Kardakow. Bumaschnaja Promischlennost Nos. 7 and 8; Papier Fabr. 24, 678-680 (October 31, 1926). Descriptive of American practice in newspaper manufacture.—J.L.P.

Developments in the Grinding of Wood Pulp. Anon. Zellstoff U. Papier 6, 433-435 (Oct., 1926). An outline of recent developments in the manufacture of mechanical pulp.—J.L.P.

Production Control in the News Print Industry. George D. Bearce. Paper Trade J. 84, No. 1, 53-57, 60 (Jan. 6, 1927). Examples are given of the type of report forms adopted by the News Print Service Bureau for quality and production records in groundwood, sulphite and paper mills and for steam plant efficiency, with a brief discussion of the benefits derived by the members of the News Print Service Bureau from the exchange and comparison of these reports between mills.—A.P.-C.

Groundwood Control. Ray. J. Schadt. Paper Trade J. 84, No. 8, 183, 185 (Feb. 24, 1927); Paper Mill 50, No. 9, 118, 120 (Feb. 26, 1927). After discussing the freeness and the blue-glass methods of groundwood control, the author shows the relation between power consumption per cord of wood ground and the quality of the resultant stock, and how this ratio can be used as a control test complementing the freeness test. The power consumption method has proved equally satisfactory for controlling the operation of pocket and of magazine grinders.—A.P.-C.

Construction of a Segmental Pulpstone and Its Operation. W. W. Greenwood. Pulp and Paper International No. 101-105 (Feb., 1927). The reasons for the unique construction of the Norton segmental pulpstone are traced from its beginning, step by step, so as to make clear the part played by every portion of the assembly. In mill operations the stock produced is as good as that from sandstones, with no more screenings; temperature conditions have about the same effect as with sandstones; the Norton stone is much harder, requiring less frequnt burring, and it is estimated that its life would be from 4 to 5 years; the power consumption per ton of pulp is approximately the same as for sandstones.—A.P.-C.

Comparison of Grinders. A. F. Meyer. Paper Trade J. 84, No. 8, 188-93 (Feb. 24, 1927). Operating data for a considerable number of additional stones are tabulated in the same way as was done a year previously.—A.P.-C.

Pulp and Board from Steam-Exploded Wood. W. H. Mason. Paper Trade J. 84, No. 8, 131-136 (Feb. 24, 1927). A detailed acccount of the experiments leading up to the commercial production of Masonite products, including a description of the mechanical equipment of the plant of the Mason Fibre Co. at Laurel, Miss.—A.P.-C.

Stones for Wood Grinders. F. Hoyer. Papierfabr. 24, 728-730 (Nov. 21, 1926). A practical article on material for grinder stones.—J.L.P.

Norrona Artificial Pulpstone. Aksel Arstal. Paper Trade J. 84, No. 1, 58-59 (Jan. 6, 1927). The advantages of this stone are: it is safe against bursting; it has a grit of the size, form and hardness adapted to the different stock qualities to be produced; the burring is reduced to a minimum; it lasts long and gives high production.—A.P.-C.

Quarrying and Finishing Pulpstone. J. N. Peterson. Pulp and Paper 25, 127-128 (Jan. 27, 1927). Description of the methods employed by the Smallwood Stone Co., Empire, O.—A.P.-C.

Wood Grinder for the Manufacture of Mechanical Pulp. Aktiebolaget Karlstads Makaniska Verkstad. Ger. pat. 435,934. Papierfabr. 24, 717 (Nov. 14, 1926). A horizontal grinder, with a vertically arranged magazine, is described. Pressure is exerted by a horizontally acting plunger.—J.L.P.

Feeding Device for Continuous Grinders. J. M. Voith Co.

Addition 30,712 to Fr. pat. 588,581. The main patent provides for large toothed wheels projecting inside the magazine near the bottom and positively feeding the wood against the stone. According to the present invention, the teeth consist of plates which are substantially tangential the circumference of the wheel, and spaced apart sufficiently to leave room for one or more logs to fall into the interval as it enters the magazine. The bottom of this space is rounded to prevent the logs from jamming, and the latter are discharged by gravity as the space leaves the magazine. The plates may be either fixed or pivoted to the wheels. The plates of one wheel when inside the magazine are opposite the spaces of the other wheel inside the magazine—A. P.-C.

Grinder Regulator. J. F. C. Rouyer. Fr. pat. 604,557, Jan. 13, 1925. The usual device for regulating the amount of pressure fluid (generally water) to the cylinders of the grinder presses is made to operate a needle-valve which can open or close a discharge outlet between the regulator and the cylinder. A certain amount of play is left between the two parts, the amount of play being adjustable.—A.P.-C.

Grinder Including Means for the Pretreatet of Wood. C. J. Sternkopf. Fr. pat. 598,725. In order to utilize the heat generated by the grinding of the wood, water is introduced into the magazine and the outlet for the discharge of the groundwood is at a considerable height above the stone so that the magazine is partly filled with water in which the wood soaks for some time before it reaches the stone. This water is heated by the heat generated by grinding and may also be heated by a steam coil or by steam-jacketing the magazine.—A.P.-C.

Production of Groundwood from Bordeaux Pine and Other Resinous Woods P. M. F. Chevalier-Girard. Fr. pat. 601,621. The wood is chipped, boiled at 90° to 110° C. with more than the amount of caustic soda (or other alkali) theoretically required to dissolve the resins, drained, washed, and ground, preferably in an ordinary wood grinder.—A.P.-C.

Treatment Allowing of Economical Grinding of Wood. Societe d'Etudes et d'Applications pour le Proges de l'Industrie Resiniere. Fr. pat. 603,953. The wood is chipped and soaked in a dilute solution of caustic or carbonated alkali or of alkali sulphite or disulphite, either at ordinary temperature for several days or at high temperature and pressure for a few hours. It may then be ground in the usual way, but with a much lower power consumption, or it can be cooked in the usual way to give high-grade chemical pulp.—A.P.-C.

Cooking of Wood for Steamed Mechanical Pulp. K. Dauselt. Papierfabr. 25, 3-4 (Jan. 2, 1927). Copper linings for containers employed in the preparation of steamed mechanical pulp are subject to cracking, and the wrought iron shell under the copper is corroded. The construction of iron shells which are not attacked is possible and brief mention is made of this subject.—J.L.P.

Steaming and Cooking of Wood for Mechanical Pulp. F. Hoyer. Papierfabr. 24, 658-659 (Oct. 24, 1926). A practical discussion covering the preparation of steamed mechanical pulp.—J.L.P.

Beating

Beaters and Paper Machines. Anon. Wochbl. Papierfabr. 57, 1104-1106 (Oct. 2, 1926). Brief discussion relating to beater and paper machine construction and operation.—J.L.P.

Beaters and Paper Machines. Anon. Wochbl. Papierfabr. 57, 1240-1242 (Nov. 6, 1926). A discussion relative to the roll width, watermarking, and machine shake in the manufacture of fine papers and paper board.—J.L.P.

Rod Mill in the Preparation of Paper Stock. Anon. Zellstoff U. Paper 6, 514-515 (Dec., 1926). Descriptive of the rod mill as employed in the paper industry, and based on the article by J. D. Rue and S. E. Wells in the Pulp and Paper Mag. of Canada, No. 40 (1926).—J.L.P.

Beater Performance. Peteer. Wochbl. Papierfabr. 57, 1156-1159 (Oct. 16, 1926). Polemic with Walter in Wochbl. Papierfabr. No. 51 (1925).—J.L.P.

Pneumatic Beater Bedplate. Anon. Paper Trade J. 83, No. 22, 47 (Nov. 25, 1926); Pulp and Paper 24, 1451-1452 (Dec. 2, 1926). The Stuart pneumatic bedplate provides a draft space between two sections of the regularly spaced metal knives into which compressed air is preferably injected; but even if no air pressure is available the plate may still be used to advantage over plates of standard design. It is considered that the draft space causes the stock to travel faster, the fibers are crossed and their relative positions disturbed, and the stock comes through cool and uniform. The effect is to prevent free and slow stock on the machine.—A.P.-C.

Ball Mill or Other Closed Rotating Beating Device. K. F. Lindstrom and J. B. Knobel. Ger. pat. 438,247. Wochbl. Papierfabr. 58, 20 (Jan. 8, 1927). A closed, rotating beating contrivance is provided with an outlet and an inlet tube so that several of the machines can be connected in series.—J.L.P.

Beating House Problems. R. Marx et al. World's Paper Trade Rev. 86, 1908-1914 (Dec. 17, 1926); 2080-2086 (Dec. 31, 1926); Paper Maker and Brit. Paper Trade J., 73, 14-18 (Jan. 1, 1927). A discussion of modern tendencies in improving beater room operation and efficiency.—A.P.-C.

Rod Mill As a Refiner and Beater. John D. Rue. Paper Trade J. 83, No. 24, 43-44 (Dec. 9, 1926). A discussion of the possibilities of the rod mill for beating sulphite for greaseproof paper and for refining knots, screenings, partially cooked chips and uncooked extracted chips, based on the somewhat limited experience gained through experiments with a semi-commercial mill at the Forest Products Laboratory (Madison, Wis.), and with a commercial mill in use on the refining of partly cooked extracted chestnut chips. Results to date appear very promising.—A.P.-C.

Bleaching

Rag Bleaching. W. Schmid. Papierfabr. 24, 598-599 (Sept. 26, 1926). The subject of rag bleaching is covered in a practical manner.—J.L.P.

Modern Bleach Plants. E. Belani. Papierfabr. 24, 762-764 (Dec. 5, 1926). The preparation of bleach liquor from chlorine and the Bellmer bleaching system are described.—J.L.P.

Cold Bleaching at High Density. M. E. Boehm. Zellstoff U. Papier 6, 394 (Sept., 1926). A German translation of the original article in Paper Trade J. For abstract see C. A. 20, 2071 (1926).—J.L.P.

Process for the Production of Bleached Cellulose. Chemische Fabrik Griesheim-Elektron and Hermann Wenzl. Eng. pat. 256,757, Aug. 19, 1926. The process consists in subjecting the raw material to a preliminary treatment with a mixture of alkali sulphites and bisulphites, and to a subsequent treatment with chlorine in the form of gas or of an aqueous solution, instead of a treatment with hypochlorites, both treatments taking place in a medium of acid character.—A.P.-C.

Relation Between Constants for the Degree of Digestion and Bleachability of Wood Pulp and the Chlorine Consumption in Practical Bleaching. G. K. Bergman. Papierfabr. 24, 742-746 (Nov. 28, 1926). Comparative tests on a series of chemical wood pulps with a number of methods designed to show the degree of digestion and the bleachability of the pulps and the relation of the constants, so obtained, to the actual chlorine consumption in bleaching practice are described. The Enso chlorine number (a modification of the Wrede method) yields a lower value than that required by practice; the Tingle chlorine factor multipled by 3 yields higher values, except for sulphate pulp when the figure is lower. The Bergman chlorine number was slightly lower in three tests and slightly higher in three other tests. For commercial bleaching the Bergman chlorine number is a satisfactory index of the chlorine requirement of the pulp. Strength, ash and cuprammonium viscosity tests are given for 6 pulps before and after bleaching. The copper number and alpha cellulose content

or the pulps are tabulated. The relation between the Bergman chlorine number (B) and the Enso chlorine number (E) is given by the formulas: $B=(0.70+0.23E)\ E$ for sulphite pulp, and $B=(0.82+0.11E)\ E$ for sulphate pulp.—J.L.P.

Process for the Bleaching of Pulp. Koln-Rottweil Akt.-Ges. and E. Opfermann. Ger. pat. 436,804. Papierfabr. 24, 748 (Nov. 28, 1926); Wochbl. Papierfabr. 57, 1342 (Nov. 27, 1926); Zellstoff U. Papier 7, 26 (Jan., 1927). In the bleaching of wood pulp with the usual bleach liquors, a small amount (1% based on the pulp weight) of a caustic alkali or magnesium hydroxide is added. The liquor should react alkaline at the end of the bleaching process.—J.L.P.

Measurement of the Gloss of Paper. H. Schulz and W. Ewald. Zellstoff u. Papier 6, 427-429 (Oct., 1926). A new glarimeter, manufactured by the Askania works in Berlin-Friedenau, is pictured and described. The apparatus is substantially protected by a metal covering and is self contained. Color filters are provided to correct for differences in the light source, which is mounted on one side of a half cylinder. On the other side is located an eyepiece. A further article on the results obtained with this instrument is being prepared.—J.L.P.

Bleaching of Sulphite Pulp-Influence of Chlorates. L. Rys Papierfabr. 24, 625-627 (Oct. 10, 1926). The influence of chlorates in the bleaching of sulphite pulp is investigated. The total chlorine present, as chloride, hypochlorite, and chlorate, is determined by diluting the bleach liquor sample of 100 cc., adding 5 cc. of 10% sodium nitrite (chlorine free), and then adding with stirring 10-15 cc. concentrated pure nitric acid. After 1 hr., add 1 cc. hydrogen peroxide, allow to stand 15 min., dilute to 175 cc. and titrate with 0.1 normal mercuric nitrate solution, according to Votocek (Chem. Zeitung, No. 64 (1918). To another sample of bleach solution hydrogen peroxide is added to destroy the hypochlorite, the solution acidified with nitric acid, and the chlorine titrated with 0.1 normal mercuric nitrate solution. The difference between the two determinations gives the amount of chlorate present. The Lunge method carried out rapidly yields practically the same results. In contradiction to the results of Schwalbe and Wenzl (Papierfabr. 20, No. 47 (Nov., 1922)), the chlorates in bleach liquors do not assist in the bleaching of sulphite pulp. Chlorates do not produce a definite effect on the chemical equilibrium during bleaching. Neither the physical conditions of the process, nor the chemical composition of the bleached pulp are influenced by chlorates.—J.L.P.

Fillers

Paper Loadings. J. Stewart Remington. Ind. Chemist 2, 430-432 (1926); Chem. Abstr. 21, 649. The composition, nature, effectiveness as a paper loading, etc., of china clay, satin white (precipitated calcium or barium sulphate and aluminium hydroxide), agitite (magnesium silicate), abionite, gypsum (satinite, mineral white) and barytes are discussed.—C.J.W.

Norweigan Talc and Soapstone Anon. Zellstoff u. Papier 6, 517-520 (Dec., 1926). The investigations of S. Schmidt-Nielsen in the Papir-Journalen, Nos. 18 and 19 (1925), (C.A. 20, 289 (1926) are described. Talc, carefully and correctly ground, and properly used, possesses special advantages over other fillers for paper.—J.L.P.

Suitability of Fillers for Paper Manufacture. Anon. Wochbl. Papierfabr. 57, 1184-1186 (Oct. 23, 1926). Besides being white, free of impurities, and possessing covering power together with other obvious properties, a good paper filler should show a definite ratio between the various sized particles of which it is composed. This ratio is determined by the quality of the paper desired. Simple sedimentation experiments, carried out by adding 5 g. of the filler to a 100 cc. graduated cylinder, adding water (22° C.) to the mark and shaking for 1 min. and determining the rate of settling, demonstrated that there was a considerable variation in samples of china clay. During the dewatering of paper stock containing fillers, two distinct processes occur: (1) a filtration process in which the largest particles and a portion of the smaller ones are retained by the fibers, and (2) an absorption process by which the smallest filler particles are retained.—J.L.P.

Dyes & Dyeing

Dyestuff Testing. A. Noll. Papierfabr. 24, 593-595 (Sept. 26, 1926). Directions for testing the purity of the auramine and indigosol dyestuffs are given.—J.L.P.

Practical Paper Coloring. M. Gottloeber. Papierfabr. 24, 641-644 (Oct. 17); 660-662 (Oct. 24); 674-678 (Oct. 31, 1926). The fundamentals of Ostwald's color theory are outlined. Practical paper coloring and the valuation of dyes for paper are described.—J.L.P.

Process for the Production of Colored Paper Sheets. C. Scheinberger. Ger. pat. 439,099, Wochbl. Papierfabr. 58, 84 (Jan. 22, 1927). By means of a ruling process and a template, dyes are applied to paper sheets in definite places.—J.L.P.

Colored Patterns on Paper. O. Palm and H. Palm. Eng. pat. 241,162. The dye bath consists of a trough in which a transmitting roll is partially immersed. In contact with this roll is a second or application roll with an absorbent covering in the form of the pattern to be impressed. The web runs on the upper side of the application roll. The liquids are applied to the wet paper web at a point at which it is sufficiently strong to support its own weight, that is, after having passed through the couch rolls, the actual position depending on the type of machine and the particular kind of material under treatment. Transmission of the liquid to the web takes place without employment of any pressure against the web and the application roll. The effect of coloring is much better and deeper than in the case of a thoroughly dry web. For the absorbent coating of the application roll a soft material may be used that would be destroyed if a counter-pressure roll were acting upon it.—A.P.-C.

Coloring of Paper Stock Black. Matzner. Papierfabr. 25, 5-6 (Jan. 2, 1927). The coloring of paper stock black with coal tar dyes offers many difficulties: there is no absolutely black dyestuff, and the preparation of a black color by the proper mixture of dyes is to expensive. Lamp black is an expensive material and has no affinity for the fibers, accordingly the greater part of it is lost in the back water. The formation of aniline black on the fibers produces an ingrain dye which is inexpensive and possesses depth of color. The dye may become greenish in time and cause a deterioration of the paper.—A.P.-C.

Sizing

Rosin Sizing. R. Uzac. Rev. Gen. Colloides 4, 257-262 (Sept. 1926); Paper Ind. 8, 1554g-1554h (Dec. 1926). The product liberated by the hydrolytic dissociation of sodium rosin soap is much more acid than the one obtained by dissociation of the fatty soaps. The author has succeeded in sizing paper with rosin that had been merely powdered very finely, but in order to obtain satisfactory results twice as much rosin was required as when rosin soap was used, or else it had to be ground so fine that the cost of mechanical dispersion would be as high as the cost of chemical dispersion (conversion into soap). Dry free rosin and dry alumina do not combine, even at 300 C., but freshly precipitated free rosin and moist, hydrated alumina, when allowed to remain in contact, partially combine to form aluminium resinate. Moreover, as the partly combined mixture can be heated to 150° C. for 1 hr. without melting the rosin, it is probable that the remaining free rosin forms a rosin-basic resinate complex. The rosin-hydrated alumina mixture can be used for sizing in paper mill practice, but its cost would be slightly higher than that of rosin soap, and the latter gives a better distribution of the rosin. Rosin alone, or in presence of soda, soap, or sodium aluminate, cannot be ground in a ball mill because the particles of rosin soon adhere to the balls and the wall of the mill; but when ground in presence of hydrated alumina it forms a smooth, unctuous paste, which readily emulsifies with water and is suitable for sizing. In order to obtain equivalent results, however, twice as much rosin was required in this form as in the form of soap. Klemm's theory of the action of heat on sizing during the drying of paper

(coalescing of the particles to form a continuous film over the surface of each fiber) is rejected, and Uzac considers that the increase in temperature favors the formation of the basic resinate and of its colloidal complex with the remaining free rosin. Paper sized without alumina loses its sizing in a short time, shownig that alumina is essential. Extraction of sized paper with alcohol removes free rosin and at the same time reduces the sizing, showing that free rosin also plays a part in sizing. Uzac finally suggests that a cellulose-rosin-alumina complex is formed, and that the surface tension between this new colloid and the ink is much lower than the surface tension between the ink and the original cellulose. Schwalbe's theory that oxidized rosin cannot size and that alumina forms a sheath around each rosin particle to prevent its oxidation is disproved by the fact that powdered rosin which had stood in the air for 3 years gave exactly the same results in sizing as ordinary rosin soap.—A.P.-C.

Surface Sizing of Paper With Glue. George K. Hamill, V. H. Gottschalk and George W. Bicking. Paper Trade J. 83, No. 23, 39-43 (Dec. 2, 1926). Preliminary studies of tub-sizing with animal glue made through a large number of laboratory experiments and semi-commercial sizing trials indicate that with any given paper (1) the bursting strength increases with increased retention of the glue; (2) the folding endurance increases with increasing glue content to a certain point and then decreases; (3) the resistance to water and to wet rubbing of glue-sized papers may be markedly increased by treatment with glue-hardening materials, such as formaldehyde, but such treatment requires careful control, lest the folding endurance be affected; (4) the folding endurance of unsized, rosin-sized and surface-sized papers, whether or not hardening agents have been used, may be increased by the addition of certain softening agents or lubricants, such as glycerin and non-drying oils; (5) a limited number of tests check outside opinions that the effect of glycerin treatments, as ordinarily applied, on the folding endurance of paper, is comparatively short lived. Printing tests by the wet intaglio process of experimentally tub-sized paper indicate that: (1) uniform surface-sizing is of primary importance for the efficient production of printing, and (2) tub-sizing with glue prepared from buffalo hide cuttings does not produce papers differing noticeably from those tub-sized with commercial glues.—A. P.-C.

Sizing Resistance of Paper. Anon. Zellstoff u. Papier 6, 396,397 (Sept. 1926). A review of a recent contribution by U. Albrecht on the effect of the hygroscopic moisture in paper on its sizing resistance. By means of a suitable apparatus (abstracted in C. A. 20, 3813 (1926), the sizing resistance of paper is found to unprove by the action of moist air which softens the layers of sizing material. The sizing resistance decreased slightly when the sheet was exposed to a relative humidity 30-70%.—J.L.P.

Problem of Rosin Sizing with Hard Water. J. Chintschin. Zellstoff U. Papier 6, 429-430 (Oct. 1926). Polemic with R. Lorenz (Zellstoff U. Papier 5, 8-9 (1925).—J.L.P.

Glue as Beater Sizing. George K. Hamill, Merle B. Shaw and George W. Bicking. Paper Trade J. 84, No. 3, 38-43 (Jan. 20, 1927). Processes involving the use of aluminum formate to jell glue solutions for sizing paper in the beater were not found to offer any advantages over aluminum sulphate or chrome alum, and the use of ordinary glue solutions proved as satisfactory as the use of glue jelly. Regardless of the form in which the glue was added to the beater the hydrogen-ion concentration of the beater water appeared to govern the degree of retention of the glue in the finished paper, maximum retention being obtained when the pH of the water from the completely beaten stock was about 4.5. Similarly, the tendency of the beater contents to form excessively could be suppressed by controlling the pH through additions of alum, and foaming was a minimum at pH of 4.5 Little difference of retention was observed on varying the order of furnishing the materials to the beater, and the following order was found to give optimum operating conditions: pulp filler (if used), rosin size, alum, glue. Better retentions of the higher grades of glue were obtained than of the lower grade ones; but the improvements in the qualities of the finished papers did not indicate any economic advantage in the use of the more expensive glues. The paper machine back waters were not reused, but the retention of glue compared very favorably with that of clay fillers under parallel conditions. Use of glue gave no improvement in retention of crown filler; in two runs it improved the clay retention and in the third there was little change in clay retention. The results indicate that use of glue with rosin sizing frequently increases the strength and degree of sizing as compared with paper sized with rosin alone. None of the glue-containing papers made without rosin and dried under ordinary paper machine conditions were sized to a measurable degree. Due to the irregularities in the results of tests for degree of sizing of these experimental papers some doubt has arisen as to the applicability of the test methods ordinarily used for rosin-sized papers to those containing glue. The chief influence of the glue on all the types of papers studied seemed to be to improve certain rather intangible properties, the firmness and hardness of the papers were increased and they possessed exceptional rattle and handling qualities. The improvement in these characteristics as well as in strength and degree of sizing were especially noticeable in the book papers containing clay filler.—A.P.-C.

Surface Sizing of Paper with Agar-Agar. Anon. Wochbl. Papierfabr. 57, 1186-1187 (Oct. 23, 1926). Agar-agar, or carrageen moss, is completely odorless, tasteless, free from nitrogen, and its gelatinous property is far greater than that of gelatine as a surface sizing material for paper. The dried moss, washed with water, is immersed in 50 parts water and heated for an hour on the water-bath. After filtering the solution through a cloth, a weight of sugar equal to the moss is added and the solution evaporated to a jelly. Salicylic acid or boric acid may be added as a preservative. After drying, the product is insoluble in cold water but is soluble in hot.—J.L.P.

Buying and Use of Glue. H. Stadlinger. Papierfabr 24, 753-757 (Dec. 5, 1926.). The buying and testing of glue are described. In dissolving glue in water the material should not be allowed to swell too rapidly, neither should the solution be heated to a high temperature. Experience shows that flake glue absorbs water most rapidly and is the best to use. Acids in glue are the result of mold and bacterial action and effect chemical decomposition of the product. Overheating (boiling) is also undesirable. Other errors in the practical application of glue are discussed.—J.L.P.

Drying

Drying Paper on Yankee Machines. S. W. Fletcher. Paper Trade J. 84, No. 8, 197, 201 (Feb. 24, 1927). Discussion showing the advances made in the proper use of air in connection with Yankee machines.—A.P.-C.

Removal of Condensed Water from Drier Cylinders. Anon. Zellstoff U. Papier 7, 20-21 (Pan. 1927). Descriptive of the J. M. Arnot method for water removal from paper machine driers. —J. L. P.

Apparatus for the Heating of Calender Rolls, Driers, Etc., with Liquid or Very Viscous Fuel. W. Osthoff. Ger. pat. 436,-160. Papierfabr. 24, 717 (Nov. 14, 1926); Zellstoff U. Papier 6, 524 (Dec. 1926); Wochbl. Papierfabr. 57, 1342-1343 Nov. 27, 1926.) A device for heating rolls by means of liquid fuels is described.—J. L. P.

Drying Operation of Paper Machines. G. H. Golbs. Papierfabr. 24, 737-741 (Nov. 28) 757-762 (Dec. 53; 798-802 (Dec. 19) 817-827 (Dec. 26, 1927). A critical, matehmatical study of drier operation, with especial reference to the Yankee type machine.—J.L.P.

Drying Felts. H. Postl. Papierfabr. 24, 582-584 (Sept. 19 1926). A discussion concerning the use of asbests, cotton, and woolen felts for the drying of paper.—J.L.P.

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How To Make Cost Accounting Effective*

By C. E. Knoeppel[1]

In studying costs and costing during the past twenty-five years, the speaker has to confess that, based on what he *knows* about the subject, he cannot answer the question which constitutes the subject assigned to him to discuss. All he can lay claim to is a series of opinions on this great subject, but he takes courage and finds consolation in the fact that, when it comes right down to "brass tacks," many others lay claim to opinions on this matter of cost accounting.

The astonishing thing to one who has spent nearly twenty-five years in the cost accounting and industrial engineering field, is the extent to which whims, pet theories, notions, prejudices, local conditions, treasured theories, personal opinions, and the blind acceptance of the past, play a part in and govern our modern cost accounting practice. I venture to say that it would take many evenings to discuss the exceptions and variations to what might be agreed to as accepted practice, if we were to consider the views of all of those engaged in industry in the country who have to do directly or indirectly with costing.

You, therefore, see why I refrain from saying that I can fully answer the question, "How to Make Cost Accounting Effective," based on what I know that I know. There is one word, however, which epitomizes the answer to the question, and that word is *organization,* which is defined as "the arrangement or structure of parts: the constituting of an organism by a process of development and growth."

In the last analysis, and stripped of all embellishments, business consists of but two things—income and outgo. Balance Sheets and Income Statements are both the prologue and epilogue of business. The purpose of business is to have an excess of this income over the outgo reflected in these statements. It is the job of management to insure the making of this margin of the income over the outgo. How? Through effective cost accounting!

In this connection, Owen D. Young, chairman of the board. General Electric Company, said to the National Industrial Conference Board: "I know of no way concerns can make profits unless they render service, and conversely, if they do not make profits, they cannot render service."

Profits are, therefore, a prime necessity in business in order to render service. Any legitimate enterprise that renders a service or supplies a need, has a right to make a proper rate of profit on its investment. If it cannot do so, something is wrong with that business or the industry of which it is a component part. The time will come when the affairs of such concerns will be looked into. As regards this particular point, Owen D. Young also said in the talk referred to: "Why is it that a concern which does not render service enough to make profits, is permitted to use our labor of which we have not too great a supply or our capital, which is always difficult to get, for an unprofitable use to society?"

If the answer is that it should not, and if it is the management function to see to it that there is a proper margin of the income over the outgo, then the question, What is management?, deserves consideration.

Management, it seems to me, is the wise use of coordinated-organized-knowledge. Knowledge is not knowledge unless all important facts are available, reliable and accurate. They are not coordinated unless they dovetail, unless they synchronize logically and properly. "To use," means to put into service. "Wise," means with wisdom and understanding. To put completely into practice, wisely and with understanding, all accurate facts, logically joined together, regarding industrial matters, becomes the meaning of the task of management. In this two factors are necessary:

1—Organized knowledge.
2—Organized personnel.

which bring us back to the one word, organization.

Let me now present some facts of a negative character, as they have a decided bearing on this question of making cost accounting effective.

1—There were 100,000 commercial failures in the last six years causing a monetary loss of $3,000,000,000. Failure statistics show that over two-thirds of the failures are due to causes within the control of management. Might it not be that two-thirds of the concerns which make losses or do only well enough to break even, are suffering from troubles within the control of management?

2—I have yet to find the concern which can answer these five questions:

A—What volume is necessary to earn fixed and semi-fixed overhead?
B—At what point in the business do losses end and profits begin?
C—What capacity is it necessary to keep employed to earn cost of sales, taxes, interestt charges, and preferred dividends?
D—How much volume is necessary, in addition, to pay dividends on common stock and build up an adequate surplus
E—How much net should be earned on investment, as an average, over a period of years, and how does actual attainment compare with it?

3—Business is becoming more complex and precarious all the time, as will be seen from the following:

A—In 1850 productive effort was 80.2 per cent and distribution effort 19.87 per cent. By 1900 the proportions were 59.9 per cent

* From N. A. C. A. Bulletin.
[1] Director, Bigelow, Kent Willard & Co., Inc., and Managing Director, Waste Eliminators, Inc., Boston, Mass.

and 40.1 per cent. In 1920 they were 49.6 per cent and 50.4 per cent. It might well be that today they are 40 per cent and 60 per cent.

B—Labor cost is increasing faster than increase in wage earners and in population:

Year	Population	Wage Earners	Wages
1900	76,300,000	4,700,000	$2,000,000,000
1920	106,420,000	9,100,000	10,500,000,000
Increase	39.5%	93.6%	425%

C—Within ten years after starting 7 out of 10 concerns are found either defunct, reorganized, or absorbed by others.

4—Excess capacity in plant and equipment in industry is estimated to be 50 per cent, and to cause an annual loss of $3,000,000,000.

5—Waste in industry was appraised at 49 per cent by the Hoover Committee on Elimination of Waste in Industry, one-half of the responsibility for which was considered chargeable to management.

6—Prof. William Z. Ripley, in an article, "Stop, Look, Listen," in the September, 1926, issue of "Atlantic Monthly," had quite a little to say about industrial balance sheets and income statements, all of which was an arraignment of managerial statements covering the conduct of business, and showed the great need of betterment in these important business documents.

A picture of this kind shows conclusively the great improvement that must be made by and in management in this, the second quarter of this century. As a basis for this improvement, and that we may get our values expressed correctly, it seems necessary to turn for a moment to the realm of economics. Economy means wise management of money matters. As industry is the spinal column of our national life and the basis of the existence of our people, economics becomes the science of securing industrial, and national efficiency, the art of which science must be practiced by management.

Industry is a cooperative mechanism, designed and built to replace individual effort, to supply the needs and wants of mankind, that the requirements of our modern society may be met. Supplying goods and rendering service, at a profit and not profit-making merely for the sake of profits, is therefore the real goal of industrial activity. The engineer has consistently held that high wages and low costs were not inconsistent. He has held that as waste was eliminated, wages could be increased while costs, and therefore prices, could be reduced. We are finding this to be so, and we are also finding that as this widening of the gap between the wage and price posts continues, purchasing power is increased and this in turn stimulated demand. Demand is always on the increase potentially, because there is no limit to human desire. We no more than satisfy one demand than another takes its place. Therefore, it seems to me that the law of "supply and demand" must be changed to the law of "supplying the demand."

In connection with this matter of economics, Dr. Hadley has said that the success or failure of a man engaged in manufacture, in transportation, or in agriculture, depends more upon his skill as a prophet than upon his ability as a producer. This is supported by David J. Jordan, who says that external conditions exert a more potent influence over company profits than do internal conditions. He further says that the gains which come from the ability to foresee the trend of general conditions far exceed the margin of pure profits, which competition holds within narrow limits. Sound economics demand that cost accounting must be effective, and the task of making it so is the task of management.

I am not going to say, even in the light of the foregoing, that cost accounting has fallen down, but I wonder sometimes if it has kept pace with the business procession and meets the demands of the day. The great mystery to a purely professional man is why in so many instances, executives at the top, and foremen at the bottom, give so little real consideration to costs and cost accounting. The difficulty is that in too few cases is cost accounting looked upon as chart, and sextant of the business ship. Rather is it looked upon too often as a graveyard of dead facts and figures from which there is no resurrection; a costly system of red tape which yields meaningless, incorrect, or inadequate results; a post-mortem process instead of something which can render effective aid in terms of futures.

It seems, therefore, that it might be well to attempt to organize our knowledge regarding the use to which cost accounting can or should be put, in order that it may become more effective in meeting the rigid requirements of our complex industrialism of today. These can be considered as theories, opinions, viewpoints, axioms, laws or principles, or whatever you might choose to call them.

These, let us say, axioms, are as follows, as I see the picture:

1—The Relation Between Cost and Price is not Arbitrary nor Fixed. The old theory that cost plus something equals price is an exploded theory. Many times it is cost minus something equals price. Cost of making tires of a given size may vary, but price is the same. Ford has reduced his price before he reduced the cost to meet the price decrease. External influences of competition many times have more to say about price than cost statements. These facts were clearly recognized by an Englishman who said: "The great need of the business world is a sound price, a price which bears direct relationship to economic facts. It is the discovery of that price which constitutes our biggest problem."

In other words, from the standpoint of making cost accounting effective, it must be recognized that economic facts govern price (not costs which are only indicators), and one function of cost accounting is to determine and evaluate economic facts.

2—Profit Should Bear a Relation to Effort Expended and Its Facilitation and not to Total Cost. Effort expended and its facilitation (labor and overhead) are the items to which to apportion or relate profit, as it is the true investment. Material itself is not the prime factor: what is done to it is. Material is merely merchandised or jobbed or stored, and the viewpoint should be as if the buyer of the product purchased the material and supplied it, on which no profit was to be charged. If this is not done then the price asked for complicated work will be too low, and for simple, easy or tonnage work too high in loss of money in the one case, and loss of business in the other. This will clearly be seen if attention is given to the following comparison:

JOB	A	B	C
Material	$400	$600	$800
Labor	300)600	200)400	100)200
Overhead at 100%	300)(x)	200)(x)	100)(x)
Total cost	$1000	$1000	$1000
Profits at 20%	200	200	200
Price	$1200	$1200	$1200
Profit on (x)	33 1/3%	50%	100%
Effort and facilitation content (x)	60%	40%	20%
Total cost	$1000	$1000	$1000
Profit at 70% on (x)	420	280	140
New price	$1420	$1280	$1140
Price change	plus $ 220	plus $ 80	minus $ 60

A better yardstick for measuring profits will help to make cost accounting more effective.

3—Variations in Prices of Important or Basic Materials Should not be Included in Cost. In one of the industries of the country, large quantities of copper, rubber, tin and cotton are used. If as to any one plant in this industry, there is high priced material on hand on a falling market, heavy losses are taken. On the other hand, if low priced material is on hand on a rising market, excessive profits are made. The one helps to balance the other. The swings are cyclical. They may or may not be a "within the year" proposition. They are without reference to manufacture, the efficiency of which may be constant during the period of loss and that of profit. Unless these savings are isolated and treated separately, both cost and price calculations may be misleading and dangerous, and as a result accounting cannot be effective. To make it so, material costs should be carried to inventory at time of receipt at cost, and to "work-in-process" at standard cost or market price at time of use. The differences can be cleared to a "Purchasing Profit and Loss Account."

4—What is Produced Regardless of Volume or Capacity Should not Absorb All Overhead Expenses. A sales manager once said to me that if he used cost estimates on which to base

prices when business was operating at 40 per cent to 60 per cent of capacity, his prices would be so high as to result in his losing orders. On the other hand, he stated that when business was operating at 100 per cent to 120 per cent of capacity, cost estimates were so low that a normal profit added to them meant prices lower than he knew he could get for his goods. In both cases he threw the cost estimates into the waste basket and made prices which he was reasonably certain would secure the sales. He further stated that only when the business was operating at 80 per cent to 85 per cent of the capacity could he rely on the cost estimates, and he priced accordingly. It all gets back to the matter of whether all of the overhead is to be applied to one-half or twice the normal production. As in the case of materials, these volume or capacity swings are cyclical. They may or may not be within the year. They are without reference to manufacturing, the efficiency of which may be constant during abnormal swings. To make cost accounting effective from these angles, it is necessary to standardize overheads on the basis of what is a normal capacity, and take the under-earned or over-earned burden into a Volume or Capacity Profit and Loss Account.

5—Direct Costs Should Not Absorb Waste, Idleness, and Inefficiency. In a hearing before the Federal Trade Commission in 1918, I presented this principle: "To place the burden of inefficiency and waste on the shoulders of those who are responsible for that condition, so as not to include it in prices paid by the consumer, costs of operation should be predetermined on the basis of practical standards, within the attainment of workmen, machine, department, or plant. Any difference between the actual costs, and the standardized costs, should be carried monthly into a departmental cost adjustment account and closed into profit and loss at the end of the year." Savings made would naturally be an offset to these losses.

If costs are handled on this basis, we can isolate waste, idleness and inefficiency, and thereby make cost accounting more effective.

6—Overhead Should Not Be Apportioned to Labor Plus Material. It should not be necessary to mention this "don't" in this day and age of advanced cost practice, but every so often we meet this kind of burden apportionment. The effect of this plan is to make the work with the greatest relative amount of material cost too much, while work with the greatest relative amount of labor will cost too little. To make cost accounting effective, direct material should not enter into the consideration at all in apportioning burden.

7—Overhead Should Not Be Absorbed by the Labor Dollar or Hour Only. This is the day of machinery in industry. Equipment is more and more becoming a factor in the making of goods, and because of this fact, must be considered in costing. Machinery takes the place of labor. It is composite manpower or labor, and as such should absorb its share of the overhead costs. The balance can be apportioned to the direct labor hour or dollar, it does not make much difference which, although my own preference is for the hourly basis for both machine and man. On such a basis as outlined, cost accounting becomes more effective.

8—Blanket Overheads Should Not Be Used for all Departments. It should be unnecessary to put forth this contention, but some still cling to this antiquated basis, so a word must be given to it. An average cost means that some items cost more and some less, and cost accounting to be effective must reconcile the difference. This statement is particularly appropriate as to depreciation rates.

9—Ratios of Indirect or Non-productive Costs to Direct or Productive Costs are not a Gauge of Efficiency. Relation of actual results to standard or budgeted results states the relative accomplishment, which is the real gauge of efficiency. Comparing a variable with a variable means little. To make cost accounting effective, variables should be compared against definite measuring sticks.

10—Expense Comparisons Should Not Ignore Relative Performance or Results. To say that the cost of rivet blanks increased in one month as against another, without at the same time comparing the rivets driven in the same periods (number and kind and time), is to say what may not be true. Cost accounting will be made more effective when increases and decreases in overhead costs are equated in terms of relative performance or results produced by the outlays.

11—Blanket Costs in Terms of Weight, Count, or Length Are Not True Costs. A large structural concern received a contract for building and erecting an office building. It estimated the various costs on a tonnage basis, and when the work was finally costed, it was found that a heavy loss had been sustained. Investigation showed that the relative amount of labor, and the varying degrees of complexity of work, had not been properly considered. All costs were estimated at flat rates or averages per ton and the complicated work to be done was figured at too small an amount. Cost accounting can be made effective only when the nature of the work to be done and the time of labor in such work are taken into consideration in estimating and apportioning overhead thereto.

12—Getting the Costs of Buildings and Equipment Into Cost of Production Should Not Be Governed By Expediency, By What Is Convenient To Do, or Ignored Altogether. Getting buildings and equipment and facilities into the operations is as important as including outlays for labor, material, and overhead. Ignoring all the learned considerations of wear and tear, obsolescence, wasting assets, and the like, the fact remains that a building or machine or tool is composite or stored up labor, the same as coal is stored up carbon. A machine is built to replace four workmen, and whenever or wherever it operates, four workmen are operating. If they were working in the flesh, there would be no question as to the inclusion of labor cost. Should it be any different when it comes to the machine? A building, like a machine, is composite labor, in that it represents the work of people, the cost of which is as definite as if they were at work in one place at one time. Why put the cost of labor and material and outlays for overhead into cost of production on a definite and supportable basis, and then put the cost of buildings, machines and facilities into cost without reference to relative use, time of life, and final disposition of them? What excuse is there for any evasion of the issue? Cost accounting will be much more effective when we get down to a more common sense and less "high brow" consideration of depreciation.

13—Value of Capital Assets Should Not Remain Fixed. In practice, the rise and fall in wages, salaries, interest, and cost of materials are reflected in the prices we pay for the products of industry. When it comes to capital assets, the rule is original cost less depreciation. If we assume that the dollar is worth 67 cents in terms of 1913 when the dollar was worth 100 cents, then a building erected in 1913 at a cost of $1,000,000 would cost $1,500,000 today. On the basis of a 12½ year depreciation there would be $1,000,000 in the reserve for depreciation in 1926, and if replacement was necessary, owners would have to supply $500,000 from surplus or out of their own pockets, because over the years, in the prices paid for goods, customers had not paid it. On the other hand, a plant costing $1,000,000 now will cost $670,000 when the dollar is again worth 100 cents. If this occurs in 12½ years, there will then be $1,000,000 in the reserve for depreciation, and if replacement is made, $330,000 would be left in the reserve account, which means that in prices paid for goods, the customers over the years had paid too much by this excess.

This raises the question: Is it the investment in the property, or the property itself, that we want to replace? If the latter, then the capital assets must rise and fall with the rise and fall of the purchasing power of the dollar, and depreciation must be adjusted accordingly through the use of a yearly index figure. Effective cost accounting in the future will have to reconcile these differences.

14—Profit or Loss is not a Single Item Without Reference to Relative Contribution of Sales, Purchasing, Manufactur-

ING OR FINANCIAL SIDE OF THE BUSINESS. Profit or loss is a composite figure, made up of contributions of the main divisions of the business. A manufacturing division operating at 90 per cent efficiency, is a 90 per cent division, whether market prices of material are up or down; whether plant capacity used is 60 per cent or 160 per cent. Operating efficiency is a yearly matter, whereas material prices and volume swings are cyclical factors. Compare costs in two plants, one operating one-half of the time and the other operating full time, and the logic of the above contention will at once be apparent. This will also be the case if we compare costs of two plants in which one is using high priced materials on a falling market, and the other, low priced materials on a rising market.

There are financial transactions, like purchases and sales discounts, interest on borrowed money, and the like, that are without direct reference to making or selling. The financial side is a source of profit or loss, and the extent and reasons should be known.

Cost accounting can be effective only when relative contributions to profit or loss are definitely calculated and kept separated. The praise and reward for profit making, and betterments in places where there are losses, can then be given and arranged for. Why? Because responsibility is a matter of where and how much.

Consider how much more effective cost accounting will be when we can read profit and loss statements as follows:

Item	Profits	Losses
Volume or capacity variation	$25,000.00	
Material variation		$100,000.00
Price variation		10,000.00
Waste and inefficiency		10,000.00
Financial		5,000.00
Manufacturing	150,000.00	
Totals	$175,000.00	$125,000.00
Losses	125,000.00	
Net profits	$50,000.00	

15—INTEREST ON INVESTMENT AND INTEREST ON BORROWED MONEY ARE NOT COST CHARGES. Net profit is interest on the investment, if it amounts to the same as the legal rate would yield. If it is greater, then there is a "real" profit over the legal return. If less, then the business has lost money as compared to investments in bonds and mortgages. This is a clear cut way of looking at it. On this basis it can be said that any excess over the going interest rate constitutes a reward for the risks, uncertainties, and the complexities of modern business. It requires no elaborate bookkeeping to view earnings from this standpoint. Furthermore, to put interest on investment in cost is to take a profit before it is earned, and would be equivalent to demanding interest for the use of money in advance.

Money is borrowed when there is insufficient capital. Interest on borrowed money is paid in lieu of interest or dividends, on capital invested in the business, which latter items are not cost charges. Is there any difference when it comes to borrowed money as against invested capital? Cost accounting to be most effective must reconcile these two viewpoints.

16—ACCOUNTING FOR PROFIT CALCULATION AND TAX COMPUTATION SHOULD NOT BE LIMITED NOR GOVERNED BY THE EARTH'S TRAVEL AROUND THE SUN. Business does not stop at any given point and start at one immediately thereafter. It is a continuous process. A month-to-month basis no longer serves the needs of modern business. Ending things on December 31 of each year is convenient as a milepost, but such posts do not mean anything, except that there is a year in between them. Business is distinctly and basically cyclical, particularly as to sales and purchasing, which so directly influence and govern production. According to statistics, cycles have been divided as follows:

1	taking 1 year,	or	1 year
1	taking 7 years,	or	7 years
1	taking 9 years,	or	9 years
4	taking 2 years,	or	8 years
4	taking 6 years,	or	24 years
5	taking 4 years,	or	20 years
6	taking 5 years,	or	30 years
10	taking 3 years,	or	30 years
32	.....Totals.....		129

Average years per cycle.... 4 years each
Largest number ..... 3 years each

A current three year average, by adding and dropping a year, would best present a real picture of business, and cost accounting on this basis would not only be more effective, but mean much more of comparative value than it does now.

17—STATEMENTS SHOWING THIS MONTH, LAST MONTH AND YEAR TO DATE COMPARISONS SHOULD NOT SHOW VALUES ONLY. Percentage comparisons should also be shown. The actual current showing as to any item should be compared against the estimated or budgeted item for the same period, with the variation in value and per cent definitely stated.

18—COST STATEMENTS GIVEN TO FOREMEN AND SUPERINTENDENTS SHOULD NOT INCLUDE ITEMS OVER WHICH THEY HAVE NO CONTROL AND FOR WHICH THEY ARE NOT RESPONSIBLE. The proper way to kill a man's interest in cost statements is to give him figures which have his operations and those of others all mixed together. Sales costs might be informative to a foreman, but they mean nothing to him from the standpoint of something he can concentrate on. The viewpoint to take is that of treating each foreman or superintendent as if he were in business for himself, and to give him cost statements as if he were charged with the amounts and had to pay for them out of the operations of his departments or division as if he were a business man. This will help mightily in making cost accounting much more effective than it is today.

19—FREIGHT AND EXPRESS OUT, RETURNS AND ALLOWANCES, DISCOUNTS GIVEN AND RECEIVED, AND INTEREST RECEIVED SHOULD NOT BE CONSIDERED AS COST ITEMS. In order to reduce sales to net income and to put them on a comparative basis, freight and express out and credits for returns and allowances, should be deducted from gross sales. Discount and interest transactions are clearly financial transactions, as an analysis will clearly show, and should, accordingly, be treated as such. Cost accounting can be more effective when these items are treated as suggested.

20—NEW CONSTRUCTION, BRINGING OUT NEW LINES, DESIGNS AND MAJOR REPAIRS SHOULD NOT BE DONE IN BUSY TIMES. Such work should be done in periods of low prices and proper deliveries for materials, adequate supply of labor, and when the supervisory force has time to take care of such items. Buying when others are selling is much more economical than doing so when others are also buying. Carnegie clearly recognized this as a good principle. *The New York Times,* in an editorial published May 15, 1921, said: "In times of depression and quietness of trade like the present, Andrew Carnegie used to increase the efficiency and capacity of his works in preparation for the better times which have never yet failed to come to this great and growing country. This was the manner in which he put himself in the position to sell at his own price the plants he had built when labor was plenty, because others were reducing their staffs, and white-leading their machinery."

Effective cost accounting will show when to do these things and when not to.

21—NEW CAPITAL SHOULD NOT BE SECURED UNTIL EVERY MEANS FOR RESURRECTING DEAD CAPITAL HAVE BEEN EXHAUSTED. It is too easy to get money in this great country of ours. If a need for money arises, the immediate desire is to borrow on a past showing, or put out a bond or stock issue. "Barron's," of March 31, 1924, said: "Here is a statement which might have been made by the most conservative President, Chancellor, or Prime Minister for the past two centuries of modern history. The Nation that finds an easy way to lay its hands on capital in order to spend it is going into the bankruptcy court—capital, if used for anything except specific and economic purposes for which capital ought to be used, for renewing capital, for expanding the capital force of the country—is being misused."

This statement was made by the Ex-Premier of Great Britain (Ramsay MacDonald, Socialist). We can substitute the words "business" and "plant" for "nation" and "country," and his statement is applicable to every industrial executive and financier in the country in their work of borrowing and loaning money. In

more cases than is known to banker and executive, money in the form of "dead capital" can be found right in the business by:

1—Speeding up turnover of goods in process.
2—Intensive follow-up of receivables.
3—Reduction in raw materials carried.
4—Sale of surplus equipment.
5—Salvage of obsolete, scrap, and excess materials.
6—Discounting of bills.
7—More rapid disposition of finished products.
8—Renting of unused floor space.
9—Working plants or departments two or three shifts.
10—Subletting part of work plant is unable or unfitted to handle.
11—Improvement of methods and processes.
12—Rearrangement of departments or plant.
13—Better material handling.
14—Supplying incentives to and strengthening personnel.
15—Standardization of operations and equipments.
16—Simplification of lines, styles, and products.

Effective cost accounting can bring to life much that now lies in the capital graveyard.

22—Administrative Expenses Should Not Be Considered as Being Entirely Commercial in Character. In reality, there are no administrative expenses. In the last analysis, expenses are either incurred for making goods or for selling them or for doing both. What are known as administrative items should, therefore, be apportioned to the division which is served by such expenditure, by budgeting this distribution and charging accordingly. There is another side to it. The asset side of the books shows capital employed in the business. Inventory is capital employed. It takes labor, material, manufacturing overhead, and part of the administrative overhead to put goods on the shelves or in the Shipping Department. Consequently, inventory should bear the proportion of the administrative costs which help to make the goods.

It would be well to keep the administrative costs as at present, then credit them out by charges to selling and making. Manufacturing and sales overheads should show as at present, but in addition, there would be added to each the apportionment from administrative overhead.

Treatment on this basis will help to make cost accounting more effective.

23—Viewpoint in Business Should Be that All Income is Outgo and Not Just Cost, and Profit or Loss. From the standpoint of the modern business, particularly with budgeting in mind, outgo should be considered as made up of all items of expenditure made, provided for, or retained, as follows:

1—Addition to surplus.
2—Apportionment from surplus for expansion, new construction, or major repairs, or the like.
3—Common dividends.
4—Preferred dividends.
5—Interest on borrowed capital.
6—Selling expenses (plus apportionment of administrative).
7—Manufacturing expenses (plus apportionment of administrative).
8—Direct materials.
9—Direct labor.

No single one of these nine items can be left out of consideration, without doing a business an injustice. Safety of a business demands the building of an adequate surplus. Perpetuation of a business calls for making the changes which modern progress demands, and this should be done out of surplus. Unless owners of a business are to be paid fair dividends on their investment, what incentive is there for them to assume the risks and uncertainties confronting business today? Capital cannot be induced from outside investors unless the earning and dividend record is sufficiently attractive. Interest on borrowed money must, of course, be paid, as well as the principal. Are these items any less important than merchandise creditors or salaried and wage employees? Should not the business, therefore, be treated as an entirety? If material is not paid for, vendors will stop supplying same. If wages cease, workers will quit. If taxes and insurance are not paid, risks are run. Should there be any difference when it comes to stopping the paying of interest on borrowed money and dividends on preferred stock? Is the investment by banks and outside investors any different than owner investment up to a certain point? Is not an addition to surplus as important as setting up reserves for depreciation?

The above does not mean that our accounting should be changed as above outlined, but it does mean that if the viewpoint outlined is generally accepted and given more attention, cost accounting can be made more effective.

24—What a Business Should Earn Should Be Determined and Results Compared Against It. One of the most difficult questions confronting a business is to determine what a fair profit is. Not only must the needs of the business be kept in mind, but the effect of keen competition and the cut-throat pricing sometimes indulged in, in which profit-making is subordinated to getting the business at any cost. *When those in industry wake up to the fact that the cost of unintelligent competition is paid for by them through taking less in profits or no profits at all, and that customers get the gains, they will then give more consideration to what is a fair return, and work towards securing it.* If it is definitely known what should be earned, and actual earnings are compared against the standard, greater efforts are bound to be made to secure the proper margin.

As regards the rate of fair return, it would seem that for the risks, uncertainties, and complexities of business, a fair return on investment should be from two to three times a safe or guaranteed return on bonds and mortgages, as an average, over a period of years, or from 9 per cent to 20 per cent in terms of one turnover yearly of sales to investment. A distinct service can be rendered to industry, and cost accounting can be made more effective, when necessary earnings are determined and budgeted, and actual results compared against them. To hit a bull's-eye it is first necessary to have a bull's-eye.

The foregoing treats of policies and methods to make cost accounting effective, constituting one phase of organization, that of getting together the facts covering cost knowledge. To properly view another angle of organization, let me use an automobile as an illustration. A car at the curb is mere mechanism, necessary but useless as it stands, because static. Put gas, oil and water into the car and we have mechanism plus power, but the combination is still static, because there is no driver to run the car. Only when driver, motive power and mechanism are synchronized does the combination become dynamic. Likewise with cost accounting. The type of organization for cost work, or arrangement of the various functions, constitutes mechanism, but as such it is static. Provide "paper work" or methods (which we have been discussing) which is motive power, and the two remain static because there is no personnel as yet. When proper personnel (driver), right methods (motive power), and correct type of organization (mechanism), are provided, however, the combination becomes dynamic.

In this connection, and keeping in mind that the foregoing has considered methods and policies the following laws of organization, as regards both type and personnel, will be found helpful:

A—Objective. Working up a tentative plan with reference to the ultimate cost development desired.

B—Greatest Complication. The determination of the most complicated phases of the objective.

C—Concentration. Placing in each division of the cost work all of the factors which affect the performance of the division in question.

D—Individualism. Placing in the hands of one person most competent to handle the work, one or more divisions of the cost work.

E—Mental Capacity. Dividing work in a cost organization with reference to the knowledge and ability that will be required of a man in charge of one or more divisions of cost work.

F—Specialization. Dividing work so that a man may operate in limited fields, rather than cover many diversified fields, in order that a few things may be done well, rather than a large number superficially.

G—Responsibility. Holding a man responsible for the total proven results he secured in his division, and not for the manner of working in securing these results.

H—Permanency. Training men to fill positions other than their own and providing understudies so that changes in an organization may easily be made without disruption.

I—Cross-Fertilization. Giving each man in the cost organi-

zation some opportunity during the year to know the methods and work of the departments of the plant that cost work influences and is influenced by.

J—Relationship and Instruction. Providing a man with a clear-cut conception of the relationship existing between himself and those he is associated with, as well as with a written outline of duties, functions, responsibility, and results expected and methods affecting his work.

K—Personnel. Analyzing the requirements of given positions and finding men whose qualifications match the given requirements.

L—Staff and Conferences. Creating an analytical and advisory body in a cost organization to cooperate with the executives, as well as with a conference program, in order to provide for discussing the major matters up for consideration. The Hoover Committee Report, "Waste in Industry," contains the following excerpt from the introduction: "The Committee realizes that before there can be a material reduction in the sum total of waste in industry, much earnest, painstaking work must be done. The solution of such a problem is not one of hours or days, but of years. Fundamental changes in our economic, financial, managerial, and operating concepts and practices will be required. There will be need of cooperative and individual effort. As regards groups, each must frankly face its own responsibilities and meet its own duties. Each individual, plant executive or worker, must discover his own opportunities and then accept responsibility for performance."

Please note the phrase, "fundamental changes in our economic, financial, managerial, and operating concepts and practices will be required." Has this statement a real meaning for industrial executives and financiers? Let me answer this question by ushering you into a meeting of the directors of a large company in its offices high up in one of New York's sky-scrapers. The men around the table—all able and prosperous men—register looks of contentment and pleasure, for the day is dividend day, and there is ample cash in the bank, and the books show a large surplus. At the side of the chairman is a man who is not a stockholder, therefore not a director, and who attends directors' meetings as an observer only. After transacting the regular business of the day, the motion is made to declare the regular dividend. Before the motion can be put, however, this observer quietly remarks, to the astonishment and indignation of all, that he would strongly recommend the passing of the regular dividend until the next regular period. Pressed for his reasons, he stated that the facts in his possession warrant him in predicting that the situation will shortly become an adverse one, and that the financial position of the company would be strengthened by passing the dividend. His advice prevails, the dividends are not declared, but the meeting ends in disappointment and gloom. Later, this observer's prediction came true and then he was commended for his vision and farsightedness. *He was the controller.* He knew more about the business than the directors did. They had the power to declare dividends, but they did not do so. He did not have the power to stop them, but he did so by his better knowledge of the business.

Quietly and slowly but surely, there has been an evolution at work, an evolution of production control up from foremen to our modern Production Control Departments in charge of able supervisors; an evolution of financial control down from the old type of treasurers to our modern Financial Control Departments, in charge of able Controllers. The next step—a step already taken in a few instances—is the merging of these two functions of control into one of super-control, viewing a business in its entirety, from market analysis through to shipping platform; a super-control not only considering the business in question, but the industry of which it is a part, and industry, commerce, and finance as a whole. This has all come about because we have passed through certain definite eras—machine effectiveness, manpower effectiveness, management effectiveness, distribution effectiveness (the one we are now in)—with the one ahead being that of increasing the effectiveness of invested and, particularly, credit capital.

The keystone in the structure of supercontrol is the progressive budget; the business plan of affairs which sees to it that profit is as important to earn as wages; which is as much concerned with the future as the past; which takes into consideration financial and market requirements on the one hand, and the development of the budget and its current and graphic control on the other. In this work of budgeting, cost accounting becomes an absolute necessity, particularly the type of cost accounting in which standard costs are a part, and I do not mean standard costs as to overheads only. Such a function of super-control, of which budgeting is the keystone, can be a real "staff organization" to the business in question, and the one in charge of such an important work, whether he attends directors' meetings or not, can exert a most healthy influence on the conduct of the business.

Much in this presentation may appear radical and revolutionary, yet if it is considered in terms of the great changes which have come over industry in the last twenty-five years, it will be seen that radical and revolutionary changes are coming; in fact, some of them are here. It behooves farsighted executives to seek ways and means to interpret the "handwriting on the wall." The cost accounting that will be effective in the future will be the kind which can answer the question—What are the results going to be? What is tomorrow going to mean to the business? Historical costs are going to give way to prophetic costs. Accounting for the future will replace the accounting for the past.

In closing, I will not pretend to say what I see ahead in the next twenty-five years in the cost accounting field, but in looking backward over twenty-five years, I feel safe in saying that if the progress to date is any fair index of the progress that is to come, we are going to witness a development of the utmost importance and value to industry, to each unit, to each group, to industry in its entirety—a development which may seem startling at first, for it will be a cost development that will constitute profit assurance!

Frankfort Paper Products Corp. To Run Mill

Frankfort, N. Y., August 22, 1927.—The General Tissue Corporation, which has been shut down for the last three months on account of financial difficulties, was reorganized at a meeting of creditors recently.

The new concern will conduct the business hereafter under the name of the Frankfort Paper Products Corporation. The new management is headed by H. S. Getman, president; Herman Brandeles, vice president, and David H. Ames, secretary, all of Utica.

Representatives from the State Labor Board at Albany met with the employees at the office of the plant to compile the amount of wages due and unpaid, and it was intimated that at a hearing to be held in Utica later proceedings would be instituted against the General Tissue Corporation for back wages.

According to a statement given out by Wilbur, Winslow and Bennison, attorneys in the matter, the plant will commence operating at once under the new organization.

May Sell Fort Miller Pulp & Paper Co.

Fort Miller, N. Y., August 22, 1927.—Since the devastating fire of June 18, which destroyed the paper mill of the Fort Miller Pulp and Paper Company, located at Fort Miller, N. Y., there have been many rumors concerning the future of the property.

The pulp mill of the plant was not damaged by the fire, and it has been repeatedly stated that Miss Anna M. Thorpe, the sole owner of the business and real estate, was planning a re-building of the paper mill upon a much larger scale.

It is now suggested that Miss Thorpe may be persuaded to sell the property, as power interests are said to be considering the purchase. This is confirmed by the fact that no contracts have yet been made for re-building the paper mill.

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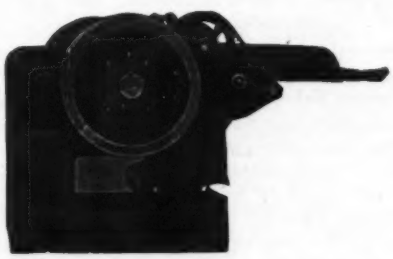

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CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Portland, Ore.—The Hawley Pulp and Paper Company, Oregon City, Ore., has completed plans for its proposed new factory branch and distributing plant at 347 East Main street, Portland, and has awarded a general building contract for the structure to Arthur & Sons, Worcester Building, Portland. It will cost close to $75,000, with equipment.

Kelso, Wash.—Plans are said to be maturing for the proposed new local mill to be constructed by the Kelso Paper Company, represented by P. J. Gallagher, Portland, Ore., and it is understood that work will begin early in the fall. The initial mill will have a capacity of about 30 tons per day, and is reported to cost close to $200,000.

San Francisco, Cal.—James H. Hjul, 128 Russ street, San Francisco, will build a new factory at First street and Guy place, to be occupied under lease by the Raisin & Zaruba Company, city, manufacturer of paper boxes and containers. It is estimated to cost about $50,000. The plant is expected to be ready for the equipment installation in about 60 days. The owner has acted as architect for the structure.

Indianapolis, Ind.—The General Fiber Products, Inc., is being organized by officials of the Rockwood Manufacturing Company, 1801 English avenue, manufacturer of paper pulleys and other compressed paper goods for mechanical service, to take over and expand that organization. The new company will be capitalized at $1,000,000, with 50,000 shares of common stock, no par value, and will develop increased production at the local plant. The reorganization is expected to be completed in about 60 days. Present officials, it is said, will continue in control, these comprising George O. Rockwood, president of the Rockwood Company; William M. Rockwood, secretary; and William D. Hamerstadt, John M. and S. P. Browning, Maysville, Ky., directors.

Exter, Neb.—The C. C. Smith Tag Company, Exter, is said to be planning the early rebuilding of the portion of its plant recently destroyed by fire with loss reported at $16,000. The reconstruction is expected to cost close to a like sum, including equipment replacements.

Stockton, Cal.—The National Paper Products Company, Church street, has awarded miscellaneous contracts for the completion of its new addition, including steel sash to the United States Metal Products Company, 330 Tenth street, San Francisco; and rolling steel doors to the J. G. Wilson Corporation, 74 New Montgomery street, San Francisco. The work will consist of two units, each one-story, 80 x 250 feet, and 60 x 100 feet, reported to cost approximately $100,000. Additional equipment will be installed. Barrett & Hilp, 918 Harrison street, San Francisco, have the general building contract.

Sacramento, Cal.—The Sacramento Development Company, Sacramento, is reported to have preliminary plans maturing for its proposed new pulp mill on tract of land recently secured. It will consist of several buildings, reported to cost in excess of $750,000, with equipment.

Chicago, Ill.—The Shellmar Products Company, 5301 West 65th street, manufacturer of special paper goods, including printed labels and wrappers for candy bars, etc., has concluded negotiations for the purchase of a one-story building at 3501 West 48th place, in the central manufacturing district. The structure is 108 x 185 feet, comprising about 21,000 square feet of floor area, all of which will be used by the new owner. It is purposed to install necessary equipment at once, and have the plant ready for service in September. It is understood that the present factory will be removed to the new location at a later date. The estimated cost of the new plant has not been announced.

St. Louis, Mo.—Card Novelties, Inc., recently organized with a capital of $10,000, and office at 305 North Main street, is said to be planning the early operation of a local plant for the manufacture of card and other paper specialties. The company is headed by Charles Bender, 4723 Nebraska street.

Philadelphia, Pa.—The Crescent Box Company, D street and Erie avenue, manufacturer of paper containers, cartons, etc., has begun the construction of its proposed new plant unit on Erie avenue near F street, two-story and basement, 80 x 300 feet, estimated to cost close to $100,000, with equipment. It is proposed to have the structure ready for machinery installation at an early date.

New York, N. Y.—Skinner & Company, 66 Day street, dealer in paper stocks, has acquired a five-story building on site 28 x 100 feet, at 12-14 Greene street, for a reported consideration of $50,000, and will occupy for local operations. It is understood that alterations and improvements will be made. The present headquarters will be removed to the new location. George W. P. Skinner heads the company.

Antioch, Cal.—The Paraffine Companies, Antioch, manufacturers of paraffine and other processed papers, has superstructure in progress on a new addition to their local plant, to be one-story, reported to cost close to $100,000. The structure will be used primarily for storage and distributing service.

Los Angeles, Cal.—The Western Lithograph Company, 600 East Second street, Los Angeles, has filed plans for the construction of a new paper goods plant at 218-20 Rose street, to be three-story, 75 x 120 feet, reported to cost about $60,000, with equipment. A general contract has been let to Joseph F. Rhodes, Pershing Square Building, who also designed the structure.

Buffalo, N. Y.—The du Pont Cellophane Company, River Road, Buffalo, N. Y., manufacturer of special sheet material from wood pulp, used largely for wrapping food products, is running under maximum capacity at its local plant, with employment of regular working force, and is said to have booked orders to insure the present schedule for an indefinite period.

Murray Bay, Que.—The Ste. Anne Power and Paper Company, Ste. Anne de Beaupre, Que., is said to have plans under way for the construction of a new pulp and paper mill at Murray Bay, where site has been selected. The new unit will be used for the production of news print, and is reported to cost in excess of $600,000, with machine shop, power substation and auxiliary mechanical buildings. It is understood that a transmission line will be constructed for power service. J. T. Donahue is president.

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Central Paper Co., Muskegon, Mich., four orders, total .....3100 H.P.
Philadelphia Paper Mfg. Co., Phila., three orders, total .....2400 H.P.
Jessup & Moore Paper Co., Phila., four orders, total .....4750 H.P.
Ontario Paper Co., Ltd.
For Daily Newspaper Co., North Tonawanda, N. Y. .....2034 H.P.
Filer Fibre Company, Filer City, Mich. .....1500 H.P.
John Lang Paper Co., Philadelphia, Pa..... 416 H.P.
Bayless Manufacturing Corp., Austin, Pa.....1300 H.P.
Northern Board & Paper Co., San Francisco, Cal., two orders, total ..... 400 H.P.
Crown Williamette Paper Co., San Francisco, Cal., two orders, total ..... 750 H.P.
Delaware Hard Fibre Co., Wilmington, Del., two orders, total ..... 920 H.P.
Kieckhefer Container Co., Delair, N. J. .....1800 H.P.

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NEW YORK IMPORTS

WEEK ENDING AUGUST 27, 1927
SUMMARY

Cigarette paper	3,196 cs.
Wall paper	4 bls.
Paper hangings	26 bls., 9 cs.
News print	135 rolls
Printing paper	211 bls., 188 cs.
Wrapping paper	10 bls., 21 cs.
Packing paper	67 cs.
Stencil paper	50 cs.
Pergamyn paper	20 cs.
Photo paper	5 cs.
Tissue paper	2 cs.
Cover paper	5 cs.
Surface coated paper	212 cs.
Metal paper	14 cs.
Colored paper	18 cs.
Filter paper	30 bls., 14 cs.
Drawing paper	35 cs.
Writing paper	14 cs.
Decalcomania paper	14 cs.
Silk paper	2 cs.
Straw board	432 rolls
Miscellaneous paper	180 cs.

CIGARETTE PAPER

British American Tobacco Co., Franconia, Liverpool, 5 cs.
American Tobacco Co., Collamer, Bordeaux, 900 cs.
R. J. Reynolds Tobacco Co., Collamer, St. Nazaire, 1,340 cs.
De Manduit Paper Corp., Collamer, St. Nazaire, 804 cs.
Max Spiegel & Son, Deutschland, Hamburg, 17 cs.
Japan Paper Co., Suffren, Havre, 1 cs.
Liggett & Myers Tobacco Co., Suffren, Havre, 8 cs.
Standard Products Corp., Suffren, Havre, 41 cs.
P. J. Schweitzer, Pres. Van Buren, Marseilles, 80 cs.

WALL PAPER

S. Stern Stiner Co., Deutschland, Hamburg, 3 bls.
F. J. Emmerich, Olympic, Southampton, 1 bl.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnewaska, London, 21 bls., 5 cs.
W. H. S. Lloyd & Co., Franconia, Liverpool, 1 bl.
A. C. Dodman, Jr., Inc., Franconia, Liverpool, 4 bls.
G. J. Hunken, Resolute, Hamburg, 4 cs.

NEWS PRINT

Hudson Trading Co., Malmen, Ortviken, 135 rolls.

PRINTING PAPER

E. Dietzgen & Co., Veendam, Rotterdam, 8 cs.
National City Bank, Sagoporack, Kotka, 76 bls.
Japan Paper Co., American Trader, London, 15 cs.
Perkins, Goodwin & Co., Deutschland, Hamburg, 32 bls.
Beekman Card & Paper Co., Deutschland, Hamburg, 7 cs.
P. C. Zuhlke, Belgenland, Antwerp, 35 cs.
N. Y. Blue Print Paper Co., Canada, Marseilles, 40 cs.
Heemsoth, Basse & Co., Resolute, Hamburg, 60 cs.
Perkins, Goodwin & Co., Resolute, Hamburg, 103 bls., 13 cs.
Walker, Goulard, Plehn Co., M. Washington, Trieste, 10 cs.

WRAPPING PAPER

A. M. Capen's Sons, Deutschland, Hamburg, 10 bls.
F. C. Strype, Belgenland, Antwerp, 15 cs.
Bendix Paper Co., Resolute, Hamburg, 6 cs.

PACKING PAPER

Old Master Paper & Pulp Co., Deutschland, Hamburg, 67 cs.

STENCIL PAPER

Arlac Dry Stencil Co., Deutschland, Hamburg, 50 cs.

PERGAMYN PAPER

F. C. Strype, Deutschland, Hamburg, 20 cs.

PHOTO PAPER

J. J. Gavin, Franconia, Liverpool, 5 cs.

TISSUE PAPER

F. B. Vandegrift & Co., Franconia, Liverpool, 1 cs.
Abraham & Strauss, Deutschland, Hamburg, 1 cs.

COVER PAPER

International Forwarding Co., Deutschland, Hamburg, 2 cs.
International Forwarding Co., Resolute, Hamburg, 3 cs.

SURFACE COATED PAPER

Stern Bros., Deutschland, Hamburg, 2 cs.
L. de Jonge & Co., Deutschland, Hamburg, 4 cs.
P. C. Zuhlke, Belgenland, Antwerp, 127 cs.
Gevaert Co. of America, Belgenland, Antwerp, 65 cs.
Zellerbach Paper Co., Resolute, Hamburg, 13 cs.

METAL PAPER

Tamm & Co., Deutschland, Hamburg, 12 cs.
Schmidt & Pritchard, Deutschland, Hamburg, 2 cs.

COLORED PAPER

H. D. Catty & Co., Belgenland, Antwerp, 3 cs.
C. W. Williams & Co., Belgenland, Antwerp, 15 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnewaska, London, 14 cs.
Orbis Products Trading Co., Collamer, Bordeaux, 30 bls.

DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnewaska, London, 5 cs.
Keuffel & Esser, Deutschland, Hamburg, 28 cs.
Murray & Co., France, Havre, 2 cs.

WRITING PAPER

A. Murphy & Co., London Exchange, London, 8 cs.
M. & H. Green, France, Havre, 1 cs.
Guibout Freres, France, Havre, 5 cs.

DECALCOMANIA PAPER

C. W. Sellers, Deutschland, Hamburg, 2 cs.
C. W. Sellers, Resolute, Hamburg, 3 cs.
B. F. Drakenfeld & Co., Cedric, Liverpool, 3 cs. (duplex).
B. F. Drakenfeld & Co., Cedric, Liverpool, 4 cs. (simplex).

SILK PAPER

H. D. Catty & Co., Veendam, Rotterdam, 2 cs.

STRAW BOARD

Perkins, Goodwin & Co., Veendam, Rotterdam, 347 rolls.
Spaulding & Tewksbury, Veendam, Rotterdam, 85 rolls.

MISCELLANEOUS PAPER

S. Gilbert, Veendam, Rotterdam, 24 cs.
J. Beckhard, Veendam, Rotterdam, 30 cs.
Japan Paper Co., Veendam, Rotterdam, 3 cs.
P. H. Petry & Co., Deutschland, Hamburg, 2 cs.
Freedman & Slater, Deutschland, Hamburg, 4 cs.
F. Henjes, Jr., Belgenland, Antwerp, 29 cs.
Quality Art Novelty Co., France, Havre, 1 cs.
Japan Paper Co., France, Havre, 12 cs.
P. H. Petry & Co., France, Havre, 8 cs.
Tiffany & Co., France, Havre, 2 cs.
Standard Products Corp., France, Havre, 10 cs.
Keller-Dorian Paper Co., France, Havre, 15 cs.
Vernon Bros., Cameronia, Glasgow, 37 cs.
Beekman Card & Paper Co., Resolute, Hamburg, 3 cs.

RAGS, BAGGINGS, ETC.

I. Cohen & Son, Coelleda, Manchester, 27 bls. rags.
Castle & Overton, Inc., Coelleda, Manchester, 1 ble. bagging.
M. Snedeker Corp., Coelleda, Belfast, 70 bls. paper stock.
E. Butterworth & Co., Inc., Coelleda, Belfast, 90 bls. paper stock.
E. J. Keller Co., Inc., Marengo, Newcastle, 162 bls. rags.
Mutnick Bros., Franconia, Liverpool, 14 bls. rags.
Goldman, Sachs & Co., Collamer, St. Nazaire, 172 bls. rags.
E. J. Keller Co., Inc., Collamer, St. Nazaire, 60 bls. rags.
Katzenstein & Keene, Inc., Collamer, Bordeaux, 47 bls. rags.
N. Y. Trust Co., London Exchange, London, 46 bls. rags.
J. Lang Paper Co., London Exchange, London, 134 bls. rags.
Amsinck, Sonne & Co., Inc., London Exchange, London, 29 bls. rags.
Filley & Son, Carenco, Marseilles, 14 bls. rags.
Bulkley, Dunton & Co., Deutschland, ——, 91 bls. rags.
E. Butterworth & Co., Inc., Cedric, Liverpool, 49 bls. bagging.
E. J. Keller Co., Inc., Caracoli, Havre, 38 bls. rags.
National City Bank, Caracoli, Havre, 318 bls. bagging.
Castle & Overton, Inc., Caracoli, Havre, 70 bls. bagging.
Royal Manfg. Co., Caracoli, Havre, 66 bls. thread waste.
Railway Supply & Manfg. Co., Caracoli, Havre, 40 bls. thread waste.
French American Banking Corp., Caracoli, Havre, 15 bls. rags.
W. Schall & Co., Caracoli, Havre, 59 bls. rags.
E. Mayer, Caracoli, Havre, 91 bls. rags.
E. J. Keller Co., Inc., Suffren, Havre, 70 bls. bagging.
State Bank, Livenza, Naples, 53 bls. rags.
Kidder Peabody Accep. Corp., Titania, Antwerp, 72 bls. rags.
Goldman, Sachs & Co., Titania, Antwerp, 111 bls. rags.
Equitable Trust Co., Titania, Antwerp, 105 bls. flax waste.
E. J. Keller Co., Inc., Titania, Antwerp, 152 bls. bagging.
National Park Bank, Titania, Antwerp, 50 bls. bagging.
Royal Manfg. Co., Titania, Antwerp, 54 bls thread waste.
E. Mayer, Resolute, Hamburg, 10 bls. rags.
Stern Bros., Resolute, Hamburg, 6 bls. rags.
Bulkley, Dunton & Co., Resolute, ——, 29 bls. rags.
E. J. Keller Co., Inc., Cameronia, ——, 41 bls. rags.

OLD ROPE

Brown Bros. & Co., Marengo, Newcastle, 50 coils.
E. J. Keller Co., Inc., Marengo, Newcastle, 145 coils.
Brown Bros. & Co., Marengo, Hull, 227 coils.
W. Schall & Co., Caracoli, Havre, 107 rolls.
Union National Bank, Hellig Olav, Copenhagen, 245 bls.
E. J. Keller Co., Inc., Cabo Espartel, ——, 187 bls.

MANILA ROPE

Ellermans' Wilson Line, Minnewaska, London, 80 coils.

CHINA CLAY

English China Clay Sales Corp., Drakepool, Fowey, 2,015 tons, 15 cwt.
Moore & Munger, Drakepool, Fowey, 1,008 tons.
I. Dixon Crucible Co., Deutschland, Hamburg, 400 bags.

CASEIN

A. Klipstein & Co., Collamer, St. Nazaire, 250 bags, 24,969 ks.
Brown Bros. & Co., Suffren, Havre, 250 bags.
M. E. Clarendon, Suffren, Havre, 300 bags.

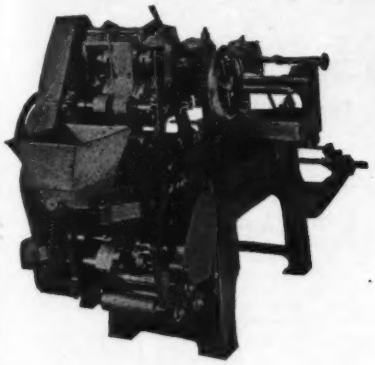
WOOD PULP

W. Hughes & Co., Inc., Laura Annie Barmes, Liverpool, 8,583 bls. wood pulp, 795 tons.
Pagel, Horton & Co., Inc., Sagoporack, Gefle, 125 bls. sulphite, 25 tons.
Bulkley, Dunton & Co., Deutschland, ——, 125 bls. wood pulp, 25 tons.
Johanson, Wales & Sparre, Inc., Deutschland, Hamburg, 150 bls. sulphite, 25 tons.
Chemical National Bank, Deutschland, Hamburg, 128 bls. sulphite, 25 tons.
Scandinavian Pulp Agency, Inc., Malmen, Skutskar, 3,570 bls. wood pulp, 548 tons.
Johanson, Wales & Sparre, Inc., Malmen, Ortviken, 1,500 bls. sulphite, 304 tons.
Scandinavian Pulp Agency, Inc., Malmen, Wifstavarf, 2,250 bls. sulphite, 454 tons.
Bulkley, Dunton & Co., Malmen, ——, 300 bls. sulphite, 50 tons.
Johanson, Wales & Sparre, Inc., Malmen, Svartvik, 433 bls. sulphite, 75 tons.
E. M. Sergeant & Co., Malmen, Gothenburg, 599 bls. dry soda pulp, 101 tons.
Price & Pierce, Ltd., Malmen, Gothenburg, 1,225 bls. wood pulp, 240 tons.
Scandinavian Pulp Agency, Inc., Minnequa, Gothenburg, 145 bls. kraft pulp, 30 tons.
American Exchange Irving Trust Co., M. Washington, Trieste, 294 bls. wood pulp.
Parsons & Whittemore, Inc., Berlin, Bremen, 260 bls. wood pulp.

WOOD PULP BOARDS

Lagerloef Trading Co., Sagoporack, Kotka, 227 bls., 47 tons.
Lagerloef Trading Co., Sagoporack, Kotka, 97 rolls, 26 tons.

(*Continued on page 72*)



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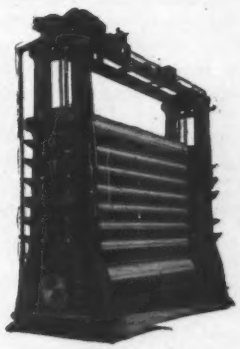

Imports of Paper and Paper Stock

(*Continued from page 70*)

Maxwell Brown Paper Co., Minnequa, Gothenburg, 22 bls., 6 tons.

WOOD FLOUR

A. Kramer & Co., Veendam, Rotterdam, 300 bags.

State Chemical Co., Veendam, Rotterdam, 400 bags.

WOOD PULP WADDING

Birn & Wachenheim, Veendam, Rotterdam, 10 cs., 100 bls.

PHILADELPHIA IMPORTS

WEEK ENDING AUGUST 27, 1927

A. Hurst & Co., Collamer, Bordeaux, 154 bls. rags.

KaKtzenstein & Keene, Inc., Collamer, Bordeaux, 286 bls. rags.

Castle & Overton, Inc., Collamer, Bordeaux, 504 bls. rags.

E. J. Keller Co., Inc., Collamer, St. Nazaire, 486 bls. rags.

P. Berlowitz, Collamer, St. Nazaire, 137 bls. rags.

Atlas Waste Manfg. Co., Collamer, Dunkirk, 255 bls. rags.

Darmstadt, Scott & Courtney, Carenco, Marseilles, 80 bls. rags.

National Bank of Commerce, Caracoli, Havre, 196 bls. rags.

Chase National Bank, Caracoli, Havre, 100 bls. rags.

W. Schall & Co., Caracoli, Havre, 49 bls. rags.

N. Y. Trust Co., Caracoli, Havre, 408 bls. rags.

Equitable Trust Co., Caracoli, Havre, 229 bls. rags.

E. J. Keller Co., Inc., Livenza, Oran, 225 bls. rags.

Paper House of Penna., Malmen, Norrkoping, 137 rolls news print.

Paper Manfg. Co., Malmen, Gothenburg, 62 bls. paper.

Considine Co., Malmen, Gothenburg, 48 bls. paper.

The Borregaard Co., Inc., Malmen, Gothenburg, 29 bls., 55 rolls paper.

E. M. Sergeant & Co., Malmen, Gothenburg, 200 bls. sulphite pulp.

E. M. Sergeant & Co., Malmen, Gothenburg, 300 bls. dry soda pulp.

Chemical National Bank, Malmen, Iggesund, 1,000 bls. sulphate pulp.

Johanson, Wales & Sparre, Inc., Malmen, Ortviken, 1,375 bls. sulphite pulp.

Johanson, Wales & Sparre, Inc., Malmen, Svartvik, 2,400 bls. sulphite pulp.

Castle & Overton, Inc., Malmen, Svartvik, 600 bls. sulphite pulp.

Price & Pierce, Ltd., Malmen, Svartvik, 750 bls. wood pulp.

Parsons & Whittemore, Inc., Denderah, ——, 307 bls. wood pulp.

Castle & Overton, Inc., Goettingen, Germany, 2,014 bls. wood pulp.

Castle & Overton, Inc., Sacandaga, Antwerp, 261 bls. rags.

Castle & Overton, Inc., Isonzo, Italy, 169 bls. rags.

Castle & Overton, Inc., Innoko, Holland, 180 bls. wood pulp.

E. J. Keller Co., Inc., Asuka Maru, ——, 50 bls. rags.

E. J. Keller Co., Inc., Denderah, Hamburg, 334 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING AUGUST 27, 1927

Pagel, Horton & Co., Inc., Sagoporack, Ornskoldsvik, 1,500 bls. sulphite, 254 tons.

Pagel, Horton & Co., Inc., Sagoporack, Gefle, 500 bls. sulphate, 101 tons.

Scandinavian Pulp Agency, Inc., Sagoporack, Gothenburg, 5,207 bls. kraft pulp, 1,041 tons.

Scandinavian Pulp Agency, Inc., Sagoporack, Gothenburg, 2,503 bls. sulphite, 499 tons.

English China Clays Sales Corp., Drakepool, Fowey, 650 casks china clay, 325 tons.

English China Clays Sales Corp., Drakepool, Fowey, 3,177 tons china clay.

Moore & Munger, Drakepool, Fowey, 443 tons china clay.

Atterbury Bros., Inc., Corsican Prince, Buenos Aires, 417 bags casein, 55,159 lbs.

T. M. Duche & Sons, Corsican Prince, Buenos Aires, 334 bags casein, 20,040 ks.

Buck, Kiaer & Co., Inc., Carlsholm, Stockholm, 600 bls. sulphite.

Parsons & Whittemore, Inc., Citos, ——, 1,828 bls. wood pulp.

Parsons & Whittemore, Inc., Malaren, ——, 100 bls. wood pulp.

Parsons & Whittemore, Inc., Seattle Spirit, ——, 310 bls. wood pulp.

Castle & Overton, Inc., Innoko, Rotterdam, 720 bls. wood pulp.

Castle & Overton, Inc., Boschdyk, Rotterdam, 45 bls. rags.

NORFOLK IMPORTS

WEEK ENDING AUGUST 27, 1927

American Exchange Irving Trust Co., Minnequa, Kotka, 300 bls. wood pulp, 50 tons.

Scandinavian Pulp Agency, Inc., Minnequa, Gothenburg, 254 bls. sulphate, 50 tons.

Scandinavian Pulp Agency, Inc., Minnequa, Gothenburg, 2,032 bls. kraft pulp, 406 tons.

Castle & Overton, Inc., Goettingen, Germany, 367 bls. wood pulp.

PORTLAND IMPORTS

WEEK ENDING AUGUST 27, 1927

J. Anderson & Co., Sagoporack, Soderhamn, 3,000 bls. sulphate, 609 tons.

Pagel, Horton & Co., Inc., Sagoporack, Gefle, 2,500 bls. sulphite, 508 tons.

BALTIMORE IMPORTS

WEEK ENDING AUGUST 27, 1927

American Exchange Irving Trust Co., Sagoporack, Kotka, 1,650 bls. sulphate, 277 tons.

Pagel, Horton & Co., Inc., Sagoporack, Ornskoldsvik, 1,140 bls. sulphite, 193 tons.

Pagel, Horton & Co., Inc., Sagoporack, Gefle, 2,275 bls. sulphite, 385 tons.

Pagel, Horton & Co., Inc., Sagoporack, Gefle, 1,000 bls. sulphate, 203 tons.

Scandinavian Pulp Agency, Inc., Sagoporack, Gothenburg, 1,143 bls. kraft pulp, 228 tons.

Scandinavian Pulp Agency, Inc., Sagoporack, Gothenburg, 1,270 bls. sulphite, 253 tons.

French American Banking Corp., Caracoli, Havre, 123 bls. rags.

National City Bank, Caracoli, Havre, 101 bls. rags.

National City Bank, Caracoli, Dunkirk, 178 bls. rags.

Baltimore News & American, Malmen, Hallstavik, 1,285 rolls news print.

Scandinavian Pulp Agency, Inc., Malmen, Skutskar, 3,150 bls. wood pulp.

Chase National Bank, Hatteras, Dublin, 194 bls. rags.

Chase National Bank, Hatteras, Dublin, 128 bls. waste paper.

M. Gottesman & Co., Inc., Minnequa, Helsingfors, 900 bls. wood pulp, 151 tons.

Brown Bros. & Co., Minnequa, Norrsundet, 2,650 bls. sulphate, 538 tons.

Perkins, Goodwin & Co., Minnequa, Obbola, 3,500 bls. sulphate, 508 tons.

Pagel, Horton & Co., Inc., Minnequa, Husum, 150 bls. sulphite, 25 tons.

Pagel, Horton & Co., Inc., Minnequa, Husum, 8,400 bls. sulphate, 1,422 tons.

Parsons & Whittemore, Inc., Minnequa, Husum, 610 bls. wood pulp, 101 tons.

Scandinavian Pulp Agency, Inc., Minnequa, Gothenburg, 762 bls. kraft pulp, 152 tons.

Parsons & Whittemore, Inc., Braheholm, ——, 680 bls. wood pulp.

Castle & Overton, Inc., Goettingen, Germany, 1,248 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING AUGUST 27, 1927

Castle & Overton, Inc., Chicago, France, 112 bls. rags.

Castle & Overton, Inc., Minnesota, France, 88 bls. rags.

Castle & Overton, Inc., West Celeron, England, 35 bls. rags.

Castle & Overton, Inc., West Gambo, Germany, 203 bls. rags.

E. J. Keller Co., Inc., Kentucky, Antwerp, 572 bls. rags.

Paper Board Industries Association to Meet

The next meeting of the Paper Board Industries Association will be held at the Palmer House, Chicago, on Wednesday, September 21 and Thursday, September 22.

On Wednesday, September 21, there will be a meeting of the Paperboard Group in the morning and of the Folding Box Group in the afternoon.

The Container Group meeting will be held on Thursday morning, September 22; the General Meeting of the three Groups in Joint Session convening at 1:45 P. M. Thursday afternoon.

Wednesday, September 21, 1927:

10:30 A. M.-12:30 Noon—Meeting of the Paperboard Group (Vice-President W. J. Alford, Jr., presiding)

2:00 P. M.-4:00 P. M.—Meeting of the Folding Box Group (Vice-President H. S. Kinkle presiding)

Thursday, September 22, 1927:

10:00 A. M.-12:30 Noon—Meeting of Container Group (Vice-President Irving Hill presiding)

12:45 Noon—Luncheon—All Members.

1:45 P. M.-4:00 P. M.—Meeting of the three Groups in Joint Session (President J. P. Brunt presiding)

As a large number of visitors are expected in Chicago during the time of the meeting, the suggestion is made that members attending the meeting arrange promptly for their sleeping car and hotel reservations.

At this meeting each of the three groups will appoint two members of a nominating committee who shall nominate a president to be elected at the November (Annual) Meeting. Group vice-presidents and members of executive committee will also be elected at the November meeting.

Notices will be issued calling meetings of the Standing Committees and of the Executive Committee, at the Palmer House, Chicago, as follows:

Meeting of standing committees 11:00 A. M. Tuesday, Sept. 20

Meeting of executive committee 1:30 P. M. Tuesday, Sept. 20

Decide on Uniform Sales Policy for Pulp

WASHINGTON, D. C., August 31, 1927.—It is stated that the Swedish sulphate pulp producers at a recent meeting in Stockholm decided upon a uniform sales policy for the future, according to a late cable report from Commercial Attache Klath. Further details are not available at this time. It is also simultaneously reported that Swedish paper production has lately shown a marked increase in volume.

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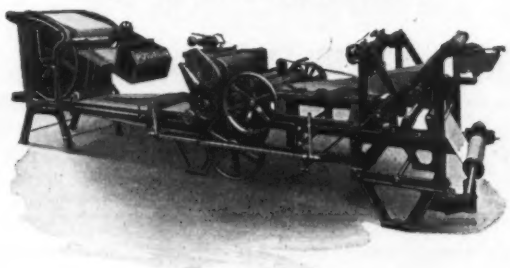

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New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, August 31, 1927.

While the condition of the local paper market during the past week was very quiet, due to the midsummer holidays, the outlook for the closing months of the year is considered decidedly promising, in view of the excellent volume of inquiries being received on account of future business for practically all the various grades. Quotations remain very steady and there have not been many reports of concessions around.

Demand for news print is improving with the approach of autumn, and the market is in a more favorable position than for some time past. In some quarters, it is predicted that between the present time and the end of the year there will be a record demand for news print from the publishers. According to the News Print Service Bureau, stocks of news print paper at Canadian mills totalled 32,282 tons at the end of July, and at United States Mills, 27,764 tons, making a combined total of 60,046 tons, which was equivalent to 4.4 days' average production.

The paper board market continues in a strong position and prices are steady to firm. Fine papers are in moderate request. The demand for tissues is excellent for the season. The coarse paper market is exhibiting a sound undertone, while wrapping paper continues to move in a satisfactory manner. Prices are holding up to previously quoted levels.

Mechanical Pulp

Not much change has transpired in the ground wood market. Demand for mechanical pulp is still light and with offerings more liberal than for some time, quotations are rather weak. However, consumers are expected to develop more interest in the market after the holidays and prices will no doubt become firmer when the demand increases to any extent.

Chemical Pulp

The chemical pulp market is practically unchanged. Business at the present time is quiet but this condition is seasonal and the demand is expected to expand considerably after Labor Day. Contract shipments of chemical pulp continue to move at a normal rate. Prices are unaltered and the schedule is being well maintained.

Old Rope and Bagging

Some improvement has been noticed in the demand for old rope and bagging. Supplies of domestic old rope are being absorbed in good style while the request for foreign old rope is also expanding. Bagging is also reported to be in better demand and prices are holding up to the previously quoted basis.

Rags

Dealers in domestic and imported rags are enjoying a moderate demand for the various grades. Inquiries for future requirements are becoming more frequent and the outlook for the immediate future is encouraging. Prices are generally holding up to schedule and shading is infrequent.

Waste Paper

With paper stock supplies decidedly scarce and evidence apparent of a growing demand from the paper mills, quotations have stiffened considerably. Collections during the summer months were below normal and the packers are asking high prices. Mixed paper, in particular, is very scarce, and is difficult to secure, even at the advanced quotation recently registered.

Twine

Little change has transpired in the twine market. The industry is in a sound position for the time of the year and leading authorities predict an excellent wind-up for the year, with the approach of autumn. Prices continue steady and unchanged, in most instances, and concessions are not likely for some time to come.

Tait Paper & Color Industries Elect Officers

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., August 29, 1927.—The annual meeting of the Tait Paper and Color Industries, Inc., was held here and directors and officers were elected for the coming year. Two new directors were added to the board, these being Louis N. Brown and Maurice Hoopes, the latter president of Finch, Pruyn & Co., of this city, A report of accountants submitted to the meeting showed a substantial increase in the profits of the firm for the past twelve months.

At the stockholders' meeting the following directors were elected: George Tait, Martin Wilmarth, John Coy, S. Carter Hall, T. S. Marshall, and Karl McBride, of Glens Falls; Erskine C. Rogers and Philip J. Riley, of Hudson Falls; A. C. Hart, of Hackensack, N. J.; Albert W. Emerson, of Wartensburg, William Seber, of Troy; James K. Welch, and William Rohe, of New York City; Louis N. Brown and Maurice Hoopes.

At a subsequent meeting of the board of directors George Tait was elected president, John H. Coy treasurer, Erskine C. Rogers, secretary, and T. S. Marshall, Karl R. McBride, S. Carter Hall and Philip J. Riley vice presidents.

W. C. Gillette Celebrates Anniversary

CHICAGO, Ill., August 27, 1927.—W. C. Gillette, founder of the Chicago Paper Company, of 801 South Wells street, celebrated his 75th Anniversary on August 10. Mr. Gillette is not only a pioneer among paper dealers, but in industrial Chicago as well, having been in business here since 1879. His first enterprise was that of a broker and later the incorporation of the present company in 1882. He has been succeeded by his son, W. N. Gillette, who invited a group of his father's closest friends to a golf and dinner party celebrating Mr. Gillette, Sr.'s birthday. The employees of his company presented Mr. Gillette with a beautifully bound set of the works of Joseph Conrad.

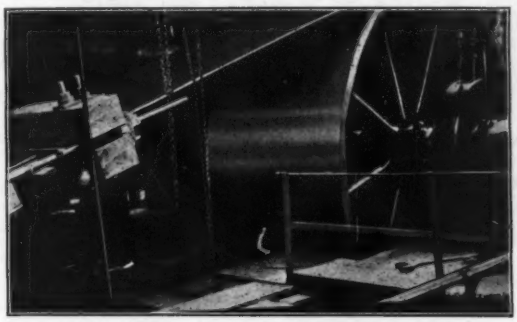
Envelope Industry Expands In Australia

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 31, 1927.—According to a recent report from American Consul General Lawton, at Sydney, Australia, the local envelope industry is making rapid strides under the protection of the present Commonwealth tariff.

While imported paper and machinery are being employed in increasing volume, the strong and durable envelopes in general use in the United States are not common, the market being mostly for the cheaper grades such as are used in European correspondence. The present tariff rates have succeeded in excluding practically all foreign envelopes except those of British manufacture which enter under a preferential rate.

RHOADS TANNATE LEATHER BELTING



A GIANT LEATHER BELT
WITH A GIANT'S GRIP

Capacity exceeds 2,000 H. P. at 4,000 f. p. m.

THE picture—The largest belt ever built by Rhoads, as it is going on the pulleys.
Width—76 inches.
Plies—4. Waterproof cemented.
Length—100 feet.
Weight—2,500 pounds.
Contains—450 pieces of leather.
Required—300 American steer hides.

It is made of Rhoads famous Tannate Leather, with its wonderful Tannate grip.

It drives sixteen beaters in a New York state paper mill on the "group drive" plan.

It is sold under the Rhoads Service Guarantee which applies to all Rhoads Belts, large or small.

J. E. RHOADS & SONS

PHILADELPHIA.....37 North Sixth Street
NEW YORK.....104 Beekman Street
CHICAGO.....324 West Randolph Street
ATLANTA.....70 South Forsyth Street
CLEVELAND.....1224 W. Ninth Street
Factory and Tannery: Wilmington, Del.

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ST. REGIS PAPER COMPANY

Daily Capacity 425 TONS

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Directory Papers
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General Sales Office

49 Wall St., New York

Farmers' Bank Bldg.
Pittsburgh, Pa.

SAVEALLS · AMERICAN CONTINUOUS FILTER · DECKERS
THICKENERS · UNITED FILTERS CORP. HAZLETON, PA. · BLEACH WASHERS

A. J. BRADLEY MFG. COMPANY
Oiled Stencil Board

Lamp Shade Parchment
IN A VARIETY OF GRADES AND COLORS
101 BEEKMAN STREET NEW YORK

Bristol's Recording Instruments

For Pressure, Vacuum, Temperature, Liquid Level, Humidity, Speed, Electric Units, etc.

The Bristol Company Waterbury, Connecticut

BRISTOL'S RECORDING INSTRUMENTS

Appleton
Felts and Jackets

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, August 31, 1927.

Conditions in the local chemical market are very satisfactory for the time of the year. Consumption has been unusually well maintained and manufacturers have been encouraged to keep their plants operating at practically full capacity. Contract withdrawals have been proceeding at a steady pace. In the opinion of many observers, the outlook for the immediate future is bright. Quotations are holding up to schedule and reports of shading are infrequent.

BLANC FIXE.—The position of the blanc fixe market is unchanged. Demand for both the pulp and the powder is fairly persistent. Prices remain unaltered. The pulp is still selling at $60 per ton, in bulk. The powder is offered at from 4 cents to 4½ cents a pound, in barrels, at works.

BLEACHING POWDER.—Shipments of bleaching powder are going forward at a normal rate. Offerings of this product are about sufficient to take care of the prevailing demand. Prices rule steady to firm. Bleaching powder is quoted at from $2 to $2.40 per 100 pounds, in large drums, at works, according to quantity.

CASEIN.—Steadiness prevails in the casein market. Most of the business transacted recently has been along routine lines, but a general expansion is expected after the holidays. Domestic casein is still selling at from 17 cents to 17½ cents per pound. Imported casein is quoted at from 18 cents to 18¼ cents a pound, all in bags, car lot quantities.

CAUSTIC SODA.—The caustic soda market is exhibiting a strong undertone. Production is being maintained in heavy volume and the output is being readily absorbed. Prices are holding up to the schedule which has prevailed for some time past. Solid caustic soda is offered at from $3 to $3.10 per 100 pounds, in large drums, at works. Spot car lots are quoted at from $3.20 to $3.25 per 100 pounds. The flake and the ground are selling at around $3.50 per 100 pounds.

CHINA CLAY.—Contract withdrawals of china clay are moving into consumption in a normal manner. The demand for both domestic and imported is excellent for the season and prices remain steady and unchanged. English china clay is still selling at from $15 to $25 per ton, ship side. Domestic paper makers' clay is quoted at from $8 to $9 a ton, in bulk, at mine, and pulverized at from $10 to $12 a ton.

CHLORINE.—Demand for liquid chlorine is persistent and contract shipments are moving in a regular manner. Inquiries for future business are numerous. Prices are holding up to schedule without difficulty. Chlorine is still selling at 4 cents a pound, in tanks, or multi-unit cars, at works, on contract orders. The spot quotation ranges from 4¼ cents to 4½ cents a pound.

ROSIN.—The rosin market is again inclined to fluctuate and prices have declined slightly since last week. According to most reports the demand for this product is fairly satisfactory. At the naval stores, the grades of gum rosin used in the paper mills are now offered at from $10.42 to $10.50 per 280 pounds, in barrels, ship side. Wood rosin is quoted at $9.50 per 280 pounds, southern shipping points.

SALT CAKE.—Trading in the salt cake market continues active and the general outlook for this product is very promising. Offerings are rather light just now and prices rule steady to firm. Salt cake is quoted at from $18 to $19 a ton, in bulk, at works. Chrome salt cake is selling at from $14 to $15 a ton, in bulk, at works.

SODA ASH.—Business in the soda ash market is excellent for the time of the year. Demand is persistent and contract withdrawals continue to go forward in heavy volume. Prices remain unchanged. Contract quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bulk, $1.20; in bags, $1.32½, and in barrels, $1.57½.

STARCH.—Consumption of starch is being maintained along normal lines. The position of the market compares favorably with the condition of the industry at this time last year. Prices remain unchanged despite increased manufacturing costs. Special paper makers' starch is quoted at $3.07 per 100 pounds, in bags, and at $3.24 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Manufacturers of sulphate of alumina continue to make substantial shipments. The prevailing request for this product is excellent and the market is in a sound position. Prices are unaltered. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.45 per 100 pounds. The iron free is offered at from $2 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—The sulphur market is exhibiting a strong tendency. Consumers of this product are reported to be taking deliveries on contract in good volume. Prices are holding up to the schedule which has prevailed for some considerable time. Sulphur is quoted at from $18 to $19 a ton, in bulk, at mine, according to quantity. The spot quotation remains unchanged at $20 per ton.

TALC.—Demand for talc continues along routine lines. Production is being maintained in sufficient volume to take care of current requirements. Prices remain steady and unchanged. Quotations on domestic talc range from $16 to $18 a ton, at eastern mines. French talc is quoted at from $18 to $22 a ton, ship side.

TO SELL QUEBEC PULP MILLS

(*Continued from page 21*)

Meanwhile it is announced that the company has purchased from Montreal Cottons, Ltd., its power subsidiary, the Valleyfield Electric Co., Ltd. The purchase price involved in the deal has not been divulged. Through this deal the Shawinigan Company at once secured 6,000 new customers, the industries served including Montreal Cottons, Canadan Bronze, McDonald & Robb Flour Company, Valleyfield Iron Works, Sterling Brewery and Valleyfield Coated Paper Company.

Sharp Decline in Paper Exports

The pulp and paper industry here is facing with surprising equanimity the fact that the exports of pulp and paper are not only failing to keep pace with the increasing capacity of the mills, but are actually showing a decline. It is believed that this is only a temporary condition which will not embarrass the older mills to any considerable extent, but the newer companies, with extensions or new mills in process of construction are watching events with considerable anxiety.

The returns of the Dominion Bureau of Statistics for July, just made available, show that in all grades of paper and in every grade of pulp, with the exception of screenings, there was a sharp decline in exports for the month, as compared with both June of this year and July, 1926. Comparison with June shows values of news print exports off by over $1,250,000.

Exports of pulp and paper from Canada in July amounted to $13,673,677 as compared with $16,054,682 in the preceding month and $15,053,695 in the corresponding month of last year. Exports of pulp were valued at $4,079,938 and exports of paper at $9,593,739.

News print exports declined over a million dollars as compared with June and they are nearly $900,000 lower than for the corresponding period of last year. The decrease was apparent not only in the value but also in the quantity. Exports in July, 1927, amounted to 140,543 tons, as compared with 159,495 tons in June of this year and with 150,778 tons in July, 1926.

For the twelve months ended July 31, 1927, the pulp and paper exports were valued at $174,284,865 as against $167,243,392 in the preceding twelve months, the increase being due to the growth in news print exports, which were valued at $118,404,234 as against $107,402,850. Exports of pulp declined from $52,038,550 to $45,241,029.

As against the above, there was an appreciable gain in the exports of pulp wood in July, when 201,112 cords, valued at $2,201,711 were exported, as compared with 172,177 cords valued at $1,763,909 in the corresponding period of last year, and with 159,183 cords valued at $1,745,710 in the preceding month.

Clay

300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

Over forty-one years' experience in the clay industry has naturally resulted in the adoption of the most scientific methods and practices. This record of achievement is your guarantee of Clay of absolute uniformity at prices consistent with M. E. quality and service.

Prices of M-E pulverized clay may surprise you even considering this additional treatment.

Let us submit sample and quote you.

THE

MINER-EDGAR CO.

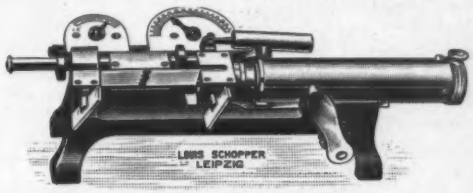
110 William St.,
NEW YORK

FOR STRENGTH AND STRETCH

SCHOPPER

RAPID PAPER TESTER

Accurately Gives Strength and Stretch of Any Kind of Paper



Invaluable to the Paper Maker in the Machine Room. Special Folder Giving Full Description for the Asking.

"Schopper" Micrometers, Tensile Testers, Folding Testers, Freeness Testers

The World's Standard Instruments

FOREIGN PAPER MILLS, INC.

Sole Agents for United States and Canada

72 DUANE ST. NEW YORK

Dietz Toilet Paper Machines

For making Toilet and Paper Towel Rolls
(With or without perforations)

Self Adjusting — Easy to Operate

Also

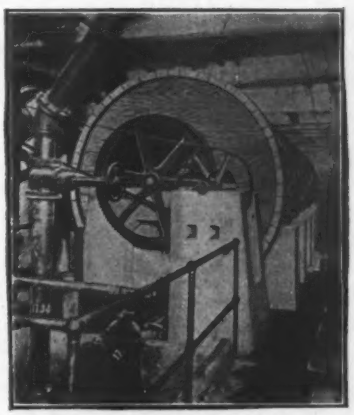
AUTOMATIC TUBE MACHINES

Producing 3,600 wire-stitched toilet tubes per hr.
Manufacturers of Sanitary Crepe Towel Machines, Slitting and Rewinding Machines, Drop Roll Slitting Machines, Photo Mount Beveling Machines, Rotary Card Cutting Machines, etc.
Correspondence solicited

DIETZ MACHINE WORKS

126-128 W. Fontaine Street
Cor. Waterloo St. (between Front & Second St.) and below Diamond St.
Phila., Penna., U. S. A.

PAPER MILL TANKS



Stuff chests, acid storage tanks, blow pits, vomit stacks, beater tubs, alum tanks, rubber-lined muriatic acid storage tanks, etc., have been built by Hauser-Stander for more than fifty years. This experience is reflected in our tanks.

The Hauser-Stander Tank Co.
Cincinnati, Ohio

DIGESTERS

forge and hammer welded

Blaw-Knox Co., Farmers Bank Bldg.
Pittsburgh, Pa.

BLAW-KNOX

Market Quotations

Quoted by Hepburn & Co., 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Advance Bag & Paper, 7s 1943	105	107
A. P. W. Pulp & Power, 7s 1945	101	102
American Writing Paper, 6s 1947	79	82
Bastrap Pulp & Paper, 6½s 1940	100	103
British Columbia Pulp & Paper, 6s 1950	85	90*
Beaver Products Corp., 7½s 1942	106	109
Berkshire Hills Paper, 8s 1941	60	80
Brown Paper Co., 1st 5½s 1946	94	98
Bryant Paper Co., 6s 1942	100½	102
Cape Breton Pulp & Paper, 6s 1932	101	103
Central Paper Serial 6, 6½s 1942	89	...
Champion Coated Paper, 6s 1926 to 1932	99	...
Champion Fibre, 8s 1930	100	...
Champion Paper Corp'n, 1st 6s 1945	95	97
Continental Paper Products, 6½s 1943	88	91½
Cornell Wood Prod., 7½s 1937	100	104*
Crown Willamette Paper, 6s 1951	97	101
Donnaconna Paper, 6s 1940	101	102½
Dells Paper & Pulp Serial, 6s 1926-38	*95	...
Eastern Mfg. Co., 7s 1938	89	91
Eddy Paper, 7½s 1931	102	104
Escanaba Paper Serial, 6s 1926-39	94	96
Filer Fibre Serial, 7s 1926-39	95	...
Fort Orange Paper, 7s 1942	95	100*
Fox River Paper, 7s 1931	99	...
Gair Co. (The Robt.), 7s 1937	104	106
Gilbert Paper Co., 6½s 1926-29	89	...
Hammermill Paper, 6s 1939	100	103*
Hoberg Paper & Fibre, 7s 1937	94½	96
Itaska Paper & Prairie River Power, J+5½s 1926-38	94	96*
Itaska Paper, 1st 6s 1933-38	96	98*
Kalamazoo Veg. Parchment, 6s 1938	98	...
Marinette & Menominee, 7½s 1936	103½	105
Menasha Printing & Carton, 6½s 1939	99½	...
Mengel Company, 7s 1926 to 1934	103	...
Monroe Paper Products, 7½s 1932	96	...
Munising Paper, 6s 1927-36	96	100
Nekoosa Edwards, 1st Ref. 6s 1928 to 1942	96	99*
Orono Pulp & Paper, 6s 1943	98	...
Orono Pulp & Paper, 5s 1941	94	...
Oswego Falls Corp., 6s 1941	98	100*
Oxford Paper, 6s 1947	104	...
Paepcke Paper Mills, 7s 1930	99	None
Parsons Pulp & Lumber, 7s 1928	97	...
Parker Young Co., 6½s 1944	96½	98½
Paterson Parchment Paper, 6s 1938	100½	102
Penobscot Chemical Fibre, 6s 1942	98	...
Poland Paper, 7s 1930	98	...
Port Alfred Pulp, 6½s 1943	*96	...
Queens City Paper, 7s 1932	95	100*
Richardson Co., 6s 1938	100	...
Spanish River Pulp & Paper, 8s 1941	106	110
Stevens & Thompson Paper, 6s 1942	93	95
St. Anne Paper, 6½s 1946	95½	98*
St. Croix Paper, 5s 1926-37	95	98*
St. Regis Paper Serial, 6½s 1926-35	98½	...
Tait Paper & Color Industries, 6s 1934	90	95
Taggart Bros. Co., 6s 1944	94	97
Ticonderoga Pulp & Paper, 5s 1930	95	98
Ticonderoga Pulp & Paper, 6s 1940	99	101
Warren (The S. D.) Company, 6s 1945	99	101
Wotab Paper, 6½s 1943	102	...
Westfield River Paper, 7s 1926-43	Wanted	...
Whitaker Paper, 7s 1942	106	108
Witmer-Parsons Pulp & Lbr. (Units)	63	70

STOCKS	BID	ASKED
Advance Bag & Paper, 8% Pfd.	100	None
Am. Tissue Mills, 7% Pfd.	95	100
British Columbia P. & P., Pfd.	65	70
Brompton Pulp & Paper, 8% Pfd.	93	98*
Brown Corpn., 7% Pfd.	97	100*
Champion Fibre, 7% Pfd.	105	...
Diem & Wing, 7% Cum. Pfd.	87	...
Donnaconna Paper, Com.	58	...
Donnaconna Paper, Pfd.	99	None
Eastern Mfg. Co., 1st Pfd.	34	37
Great Northern Paper (new)	62	65
Hammermill Paper, 7% Pfd.	105	110
Hinde & Dauch, Com.	135	...
Hinde & Dauch, Pfd.	100	...
Holyoke Card & Paper	150	None
Marathon Paper Mills, Com.	125	...
Midwest Box Co., Pfd. 8%	80	85
Midwest Box Co., Pfd. 6%	55	65
Louis De Jonge Co., 7% Pfd.	93	96
Oxford Papers, Com.	170	...
Oxford Paper Co., Pfd.	175	...
Penobscot Chemical Fibre, Com.	65	75*
Richardson Co., 7% Pfd.	104	...
Rubberoid Company (Ex. Rights)	68	72
Seaman Container, Class B (par $1)	1	None Off.
Seaman Paper Co.	Wanted	None Off.
St. Croix Paper	150	170
St. Regis Paper Co., 7% Cum. Pfd.	101½	None
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper, Com.	52	57
West Virginia Pulp and Paper, Pfd.	100½	102½
Whittaker Paper, 7% Cum. Pfd.	97	103

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.35	@ 7.75
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.75	@ 5.25
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00
(Delivered New York)		
Boards—per ton—		
News	47.50	@50.00
Straw	53.50	@57.50
Chip	45.00	@50.00
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip.	55.00	@57.50
Wood Pulp	80.00	@85.00
Container	65.00	@70.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@30.00
Dry	32.00	@34.00
(F. o. b. Mill)		
No. 1 Domestic	27.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.50	@ 4.50
Easy Bleaching	2.85	@ 3.10
No. 1 strong unbleached	2.50	@ 2.75
Mitscherlich unbleached	2.65	@ 3.40
No. 2 strong unbleached	2.40	@ 2.55
No. 1 Kraft	2.70	@ 2.90
No. 2 Kraft	2.50	@ 2.60
Sulphate—		
Bleached	3.75	@ 4.00
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.85	@ 3.05
News Sulphite	2.50	@ 2.70
Mitscherlich	3.25	@ 3.70
Kraft (Domestic)	2.70	@ 3.40
Soda Bleached	3.50	@ 3.75
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.50	@12.00
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.25	@10.75
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	6.75	@ 7.25
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.50	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.00	@ 5.50
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.75	@ 6.50
Miscellaneous	4.75	@ 5.25
White, No. 2—		
Repacked	3.25	@ 3.75
Miscellaneous	2.75	@ 3.00
St. Soiled, White	2.50	@ 2.75
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.60	@ 1.70
No. 1	1.60	@ 1.70
No. 2	1.35	@ 1.45
No. 3	1.25	@ 1.35
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.75	@ 8.50
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
New Mixed Cuttings	3.00	@ 3.50
New Dark Cuttings	2.75	@ 3.25
No. 1 White Linens	7.00	@ 7.75
No. 2 White Linens	5.25	@ 6.00
No. 3 White Linens	4.00	@ 4.50
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 2.00
Lindsay Garments	1.70	@ 1.75
Dark Cottons	1.55	@ 1.60
Shoppery	1.50	@ 1.55
French Blues	2.25	@ 2.50

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.80	@ 1.90
Domestic	1.80	@ 1.90
Wool Tares, light	1.60	@ 1.70
Wool Tares, heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.50	@ 1.65
Manila Rope—		
Foreign	3.25	@ 3.75
Domestic	4.25	@ 4.75
New Burlap Cut	3.00	@ 3.25
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

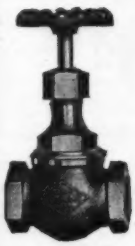
Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.25	@ 3.50
Hard, White, No. 2	2.75	@ 2.90
Soft, White, No. 1	2.85	@ 3.00
Flat Stock—		
Stitchless	1.25	@ 1.35
Overissue Mag.	1.25	@ 1.35
Solid Flat Book	1.25	@ 1.35
Crumpled No. 1	.85	@ .95
Solid Book Ledger	1.90	@ 2.10
Ledger Stock	1.55	@ 1.65
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.80	@ .90
Container	.65	@ .75
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	2.10	@ 2.20
News—		
No. 1 White News	1.70	@ 1.80
Strictly Overissue	.75	@ .85
Strictly Folded	.65	@ .70
No. 1 Mixed Paper	.60	@ .65
Common paper	.35	@ .45

You can always get new Jenkins parts

Through supply houses everywhere Jenkins Valves and Jenkins parts are easily obtainable.



Parts are interchangeable in Jenkins Valves of the same size and type. Thus the purchase of a new spindle, a new bonnet or a new disc holder can prolong for years the life of a veteran Jenkins. The Jenkins "Diamond" is in itself the mark of a valve built for maximum rather than average service. But with the interchangeable feature, the plant using Jenkins throughout is enabled to secure added years of service from trustworthy old valves.

Fig. 106
Screwed, Jenkins Standard Bronze Globe Valves.

JENKINS BROS.

80 *White Street.....New York, N. Y.*
524 *Atlantic Avenue.....Boston, Mass.*
133 *No. Seventh Street, Philadelphia, Pa.*
646 *Washington Boulevard..Chicago, Ill.*

JENKINS BROS., Limited
Montreal, Canada *London, England*

Always marked with the "Diamond"
Jenkins Valves
SINCE 1864

For Greater Economy
Without Sacrificing Quality

Use
ALPHA
FIBRE

Our new product—
which takes the place of
rags in paper-making

Inquiries from the trade are welcomed

BROWN COMPANY
founded 1852
PORTLAND, MAINE

Sulphur

A FIRST REQUISITE

IN

Paper Making

Large Production
Ample Reserves
Prompt Deliveries
Purity 99½%

TEXAS GULF SULPHUR CO.
41 E. 42nd Street — New York City
Mine Gulf, Matagorda County, Texas

WE WILL BUY

Abitibi Power & Paper, 6s, 1931	@100¼
American Sales Book, 6s	@102
American Writing Paper, 6s, 1939	@ 81
Bedford Pulp & Paper, 6½s, 1942	@ 98¼
Champion Coated Paper Co., 6s, 1931	@100
Donnocona Paper Co. 6s, 1940	@101
Eddy Paper Co. 7½s, 1931	@102
Escanaba Paper Co. 6s	@ 94
Mead Pulp & Paper 5s	o.w.
Stevens & Thompson Paper Co. 6s, 1942	@ 94
Tait Paper & Color Industries 6s	@ 90
Ticonderoga Pulp & Paper 6s, 1940	@ 99½
West Virginia Pulp & Paper Co. Pfd.	@ 99

WE WILL SELL

Cady Lumber 6½s	@ 93½
Champion Fibre 6s	@101
Donnacona Paper Co. 6s, 1940	@102
Great Northern Paper Co.	@ 64
Quebec Pulp & Paper Co. Pfd.	@ 35
St. Regis Paper Co. 6s, 1931	@100½

H. D. KNOX & CO.

44 Broad St., N. Y. **27 State St., Boston**

Inquiries invited on all Paper Pulp Lumber Securities

Twines

(F. o. b. Mill)

Cotton—			
No. 1	.28	@	.29
No. 2	.26	@	.27
No. 3	.24	@	.25
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.20	@	.22
Tube Rope—			
4-ply and larger	.18	@	.19
Fine Tube Yarn—			
5-ply and larger	.23	@	.27
4-ply	.24	@	.28
3-ply	.26	@	.30
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.19
Jute Rope	.21	@	.23
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.18	@	.20
No. 2 Basis	.16	@	.18
Sisal Lath Yarn—			
No. 1	.16	@	.18
No. 2	.14	@	.16
Manila Rope	.24	@	.26

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¾	@	.05¼
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.05¾	@	.06¼
Southern Kraft	.04½	@	.05
No. 2 Kraft	.05	@	.05¼
Wood Tag Boards	.04¾	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	45.00	@	47.50
Solid News	47.50	@	—
Manila Line Chip	55.00	@	57.50
Container Lined—			
(Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	75.00

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06¾	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila, No. 2	.04	@	.04½
No. 2 Kraft	.05	@	.05¼
No. 1 Kraft	.06	@	.06¼
Common Bogus	.02¾	@	—
Straw Board	60.00	@	65.00
News Board	45.00	@	50.00
Chip Board	40.00	@	42.00
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	85.00	@	90.00
No. 2, per ton	70.00	@	75.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	66.00	@	68.00
Slaters	70.00	@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	2.00	@	2.25
Domestic	1.75	@	2.00
Manila Rope	3.50	@	4.00
Sisal Rope	1.25	@	2.00
Mixed Rope	1.10	@	1.25
Scrap Burlaps	1.50	@	1.65
Wool Tares, heavy	3.00	@	3.50
Mixed Strings	1.25	@	1.35
No. 1, New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.25	@	2.50

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.90	@	2.00
Writing Paper	1.65	@	1.75
No. 1 Books, heavy	1.25	@	1.30
No. 2 Books, light	.80	@	.85
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	1.15	@	1.20
Container Manila	.90	@	1.00
Old Kraft	2.00	@	2.20
Common Paper	.50	@	.60
No. 1 Mixed Paper	.50	@	.60
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.80	@	.90
Old Newspaper	.60	@	.65

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.11½	@	.12
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable	.04	@	.04½
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Blue	.03½	@	.04
New Black Soft	.05½	@	.06
New Light Seconds	.03	@	.03½
Khaki Cuttings	.04½	@	.05
Corduroy	.03	@	.03¾
New Canvas	.08	@	.09
New Black Mixed	.05	@	.05½

Domestic Rags (Old)

White, No. 1—			
Repacked	4.50	@	5.25
Miscellaneous	3.50	@	4.00
White, No. 2—			
Repacked	.02½	@	.03
Miscellaneous	.02	@	.02¼
Thirds and Blues—			
Repacked	2.50	@	2.75
Miscellaneous	1.50	@	1.75
Black Stockings	3.25	@	3.50
Roofing Stock—			
No. 1	1.50	@	1.60
No. 2	1.37½	@	—
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	.90	@	1.00
B	.80	@	.90
C	.80	@	.90

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05¾	@	.06½
No. 2 Kraft	.04¾	@	.05¾
Common Bogus	.02	@	.02½
Delivered New England points			
Straw Board, rolls .009			57.50
Straw Board in Sheets, basis 35s to 70s			53.50
Filled News Board			47.50
Chip Board			45.00
Single Manila Pulp lined board	57.50	@	62.50
Single White, patent coated board bender	75.00	@	82.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.75	@	3.10
No. 2 Hard White	2.60	@	2.90
White Blank News	1.75	@	—
Manila Env. Cuttings	2.00	@	2.25
No. 1 Soft White	2.85	@	3.00
No. 1 Soft White	2.75	@	3.00
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	1.90	@	1.95
No. 1 Books, Heavy	1.17½	@	1.30
No. 1 Books, Light	—	@	1.15
Old Kraft	2.00	@	2.25
No. 1 Old Manila	1.40	@	1.60
No. 1 Mixed Paper	.60	@	—
Print Manila	.70	@	.80
Overissue News	.75	@	—
Old Newspapers	.60	@	—
Box Board, Chip	.65	@	—

Bagging

(Price f. o. b. Boston)

Gunny No. 1—			
Foreign	1.75	@	—
Domestic	1.50	@	1.60
Manila Rope and Strings—			
Foreign	3.75	@	—
Domestic	4.25	@	4.37½
Mixed Strings	.90	@	1.00
Scrap Burlaps	1.50	@	1.75
Wool Tares, heavy	1.40	@	1.60
New Burlap Cutting	2.15	@	2.25

Domestic Rags (New)

(Price f. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.11¼	@	.11½
Silesias, No. 1	.07	@	.07½
New Unbleached	.10	@	.10½
Fancy	.05¾	@	.06
Washable	.04½	@	—
Cottons—Acording to Grades—Blue—			
Blue Overalls	—	@	.07
New Black, soft	.04	@	.04¼
Khaki Cuttings	.05	@	.05½
Corduroy	.03	@	.03½
New Canvas	.09	@	.10

Domestic Rags (Old)

(Price f. o. b. Boston)

White No. 1—			
Repacked	5.00	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Thirds and Blues—			
Repacked	2.12½	@	2.37½
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.45	@	1.55
No. 2	1.33	@	1.43
No. 3	.96	@	—
No. 4	1.10	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¼	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.75	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.25	@	—
No. 1 S. C. (carloads)	8.25	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.75	@	—
No. 1 Coated and Litho	14.50	@	—
No. 2 Coated and Litho	13.50	@	—
No. 3 Coated and Litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.85	@	—
White Rag	5.25	@	—
"B" Manila	5.65	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.20	@	—
M. G.	7.35	@	—

Pulp

(F. o. b. Mill)

Ground wood	28.00	@	30.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	78.00	@	80.00
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	3.00	@	—
White Blk, News	1.50	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers	1.40	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.47½	@	.52½
No. 1 Mixed Paper	.55	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.12	@	.12½
Fancy Shirt Cuttings	.06	@	.06¼

The CLEARING HOUSE of The Paper Industry

PAPER TRADE JOURNAL
10 East 39th Street New York, N. Y.
Telephone Caledonia 0560

"SITUATION WANTED" ADVERTISEMENTS.—4c a word, double rates for heavy face type. Minimum charge $1.00. If repeated ½ rate will be charged for each consecutive repetition.

"HELP WANTED" ADVERTISEMENTS—4c a word, double rates for heavy face type. Minimum charge $1.00.

CLASSIFIED ADVERTISEMENTS—4c a word, double rate for heavy face type. Minimum charge $1.00.
All classified, "Help Wanted" and "Situation Wanted" advertisements are payable in advance.

HELP WANTED

WANTED—First-class sulphite cook with thorough experience in cooking high grade hemlock pulp. Give full information and reference in your reply. Address, Box 27-464, care Paper Trade Journal. S-1

PAPER TRADE readers find our Service effective in making connections. Individual. Confidential. Personally planned by Jacob Penn, known by all mill owners. Not agency. Jacob Penn, Incorporated, 9 Park Place, New York. tf.

IF YOU are open to overtures for new connection, and qualified for a salary between $2,500 and $25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standing and reputation, through which preliminaries are negotiated confidentially for positions of the calibre indicated. The procedure is individualized to each client's personal requirements; your identity covered and present position protected. Established sixteen years. Send only name and address for details. R. W. Bixby, Inc., 117 Downtown Building, Buffalo, New York. tf.

WANTED—Finishing Room Foreman. Must be familiar with finishing various kinds bleached and unbleached Fourdrinier and Cylinder sulphite papers. Must be experienced with operation of rewinders and cutters, able to handle help and run department efficiently. Give previous experience, age and references. Address, Box 27-486, care Paper Trade Journal. S-8

OPPORTUNITY for technically trained executive familiar with Kraft Pulp making. State education and experience and send copies of references with first letter. Address, Box 27-487, care Paper Trade Journal. S-15

SALESMAN WANTED—Experienced Corrugated Box Salesman wanted by one of the largest and best established manufacturers in the Central West. Good opening for the right man, but must be experienced and well recommended. Give all details in first letter. You do not have to be afraid to answer this ad for our own salesmen have been notified. Could also use a good **Corrugated Box Designer.** Address, Box 27-488, care Paper Trade Journal. S-1

SALESMAN—First-class, experienced, to sell new transparent paper to the jobbing trade and converters. Will have to travel extensively at first. References required. Charles W. Williams & Co., 303 Lafayette St., New York City. S-1

WANTED—An experienced adjuster on a Lockport machine, both flat and square; also on a Potdevin S O S. State experience and salary expected. Steady position for the right man. All communications will be held strictly confidential. Address, Box 27-502, care Paper Trade Journal. S-1

LIST YOUR WANTS HERE

SITUATIONS WANTED

SALES CONNECTION WANTED by young man, with manufacturer or distributor of product used by paper or pulp mills. Have had extensive sales experience and know fields thoroughly. Address, Box 27-494, care Paper Trade Journal. tf.

MILL CONNECTION WANTED—Capable experienced salesman desires mill connection. Years of experience in the sales of both coarse and fine paper. Willing to travel. Highest credentials as to ability and integrity. Address, Box 27-490, care Paper Trade Journal. tf.

SUPERINTENDENT OR MANAGER, now employed, wishes position. Long experience on fine grades book, colored specialties. Best of references. Address, Box 27-479, care Paper Trade Journal. S-1

PULP AND PAPER MILL ENGINEER, with many years experience in design, construction and maintenance, desires position. References. Address, Box 27-470, care Paper Trade Journal. S-8

WANTED—Situation as day foreman or boss machine tender. Familiar with both coarse and fine papers. Fourdrinier and Yankee machines. References. Address, Box 27-472, care Paper Trade Journal. S-8

FOREMAN-ADJUSTER paper bag machines; flat and square, self-opening and sack machines, also printing, wishes position. Long experience. Address, Box 27-473, care Paper Trade Journal. S-1

TOUR BOSS wishes position. Experienced on most all kinds of paper, also glassine and greaseproof. Address, Box 27-433, care Paper Trade Journal. S-22

AGGRESSIVE PAPER SALESMAN, of executive ability and wide experience in the manufacture and sale of high-grade Book Papers—coated, uncoated and specialties—wishes to locate with Mill manufacturing book papers as direct representative with opportunity for advancement. Ten years Mill and Jobbing experience and knows book papers intimately, and can introduce new grades and highly profitable specialties. Wide acquaintance with both merchant and converter trade. Would also consider position as sales manager at mill. Highest credentials. Those having a proposition that offers a real opportunity for a high grade man, please address, giving full particulars, Box 27-495, care Paper Trade Journal. S-8

BOSS MILLWRIGHT—17 years experience on maintenance and construction in paper plants. A good machinist and erector. Can layout work and get results. Now employed but wish a change. References. Address, Box 27-492, care Paper Trade Journal. S-8

MACHINE TENDER—Board machine tender, age 30 years, married, sober. Well up on all grades of box boards and container. Can furnish reference. Available at once. Address, Box 27-491, care Paper Trade Journal. S-1

SITUATIONS WANTED

FINE-PAPER MAN—University graduate, age 36, with over eight years experience; salesman, book and cover department head, and branch manager; available for paper merchandising house or mill connection. Familiar with mills products. Able to handle direct-by-mail sales work and general publicity. Address, Box 27-498, care Paper Trade Journal. S-1

SULPHATE FOREMAN—Actual experience in every department. Understands chemical control work perfectly. Laboratory and mill experience gained in Canadian and American mills. References. Address, Box 27-500, care Paper Trade Journal. S-8

MILL OR PRODUCTION MANAGER—Now superintendent of a well known mill, but want to make a change. A splendid business and paper making experience with an excellent production record. Well educated. Address, Box 27-501, care Paper Trade Journal. S-22

GROUND WOOD SUPERINTENDENT desires position. 20 years practical experience making pulp in up-to-date mills. Can furnish excellent references. Address, Box 27-499, care Paper Trade Journal. S-15

POSITION WANTED—Superintendent or foreman; chip board or wrapper mill. Experienced at construction and remodeling. Eastern states preferred. Address, Box 27-382, care Paper Trade Journal. S-8

PAPER MAKING MACHINERY DESIGNER AND GENERAL PLANT ENGINEER open after September 1st. Long and practical experience on this class of work, together with a number of years selling exoerience. Address, Box 27-497, care Paper Trade Journal. tf.

SALESMAN—Position wanted on or before September 15, by married man thirty-three years of age. Have had four years experience as paper mill accountant and one year sales. Desire connection where ambition and results will be recognized. Best of references. Address, Box 27-469, care Paper Trade Journal. S-1

CHEMICAL ENGINEER, Scandinavian, 9 years experience in operation of sulphite mills in Canada and Scandinavia, desires position as superintendent or similar position in Canadian mill. Address, Box 27-457, care Paper Trade Journal. S-1

PAPER MILL SALES REPRESENTATIVE—Seeking representation for New York City and adjacent territory for mills making coated book, litho, supercalendered, machine finished, offset, high bulking book, sulphite bond, cover. Wide selling experience, knowledge of paper merchants specializing in the sale, and direct consumers of these papers, combined with an understanding of manufacturer's viewpoint and procedure. Address, Box 27-441, care Paper Trade Journal. A-25

PAPER MILL SUPERINTENDENT—Trained on M. F. and M. G. Kraft and Sulphite papers, over various grades. Best of references. Address, Box 27-393, care Paper Trade Journal. S-8

"Gilt-Edge."

THE wise man with money to invest seeks gilt edge securities only. He takes no chances on anything less. And, in the long run, Mr. Careful Investor, comes out ahead of the man who is eternally looking for "good buys" and "inside prices."

The same thing applies to stuff pumps. When a mill superintendent specifies "Shartle" on his order for a stuff pump he is investing in a gilt edge product with well on to 30 years of pump building experience behind it. The superintendent is reasonably certain to obtain a generation or more of continuous, economical service out of his purchase. What's more, he is bound to come out ahead of the buyer who dotes on price advantage, installs a less desirable product, and spends far more than the difference on repairs.

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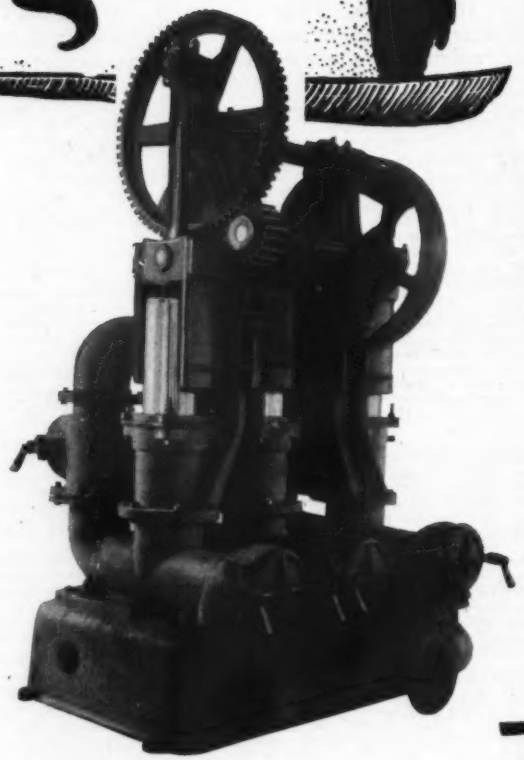

SHARTLE BROS. MACHINE COMPANY

MIDDLETOWN, OHIO

SHARTLE BROTHERS

DIVISION OF THE BLACK-CLAWSON COMPANY

SITUATIONS WANTED

HAVE HAD TWENTY YEARS EXPERIENCE in some of the best mills in the U. S. A. Millwright and machine tender, 35 years of age, married, now employed, best of references, sober. Would like position as spare man, covering cylinders, making coucher rolls, running extra. Would not consider regular job running machine. Address, Box 27-504, care Paper Trade Journal. S-1

POSITION WANTED as paper mill manager or production engineer. Extensive experience on rag and wood pulp papers. Services available at once. Can furnish best of references. Address, Box 27-503, care Paper Trade Journal. tf.

ASSISTANT SUPERINTENDENT—College graduate, chemist, nine years practical experience and research in rag fine writing papermaking and specialties, desires position with opportunity for advancement. Address, Box 27-320, care Paper Trade Journal. tf.

WANTED—Position as manager or superintendent of mill making binders, leather and other boards. Middle-aged man. Good at construction and repairs. Address, Box 27-381, care Paper Trade Journal. S-9

MISCELLANEOUS

CLARK MANUFACTURING COMPANY, Holyoke, Mass. Telephone 1828. Builders of cylinder moulds, couch and felt rolls, dandy rolls. We cover dandies and cylinders tight, for fast running machines. J-5-27

SEND YOUR ODD LOT LIST of coarse and fine papers together with samples to Goldman Paper & Paper Stock Co., 414 So. Front Street, Philadelphia, Pa. tf.

WANTED—Mill ends and job lots in rolls or flats in any quantity, all grades. Also boards. Joseph Goldstein & Sons, 1302-9 N. Halsted Street, Chicago, Illinois. tf.

WANTED—Side or odd lot rolls ten to ninety pound basis. The larger the quantity the better we like it. Address, Box 27-481, care Paper Trade Journal. tf.

ORGANIZATION having operating and sales staff wants to take over paper mill to operate with group other mills. Can arrange purchase money soon as earnings warrant. Address, Box 27-493, care Paper Trade Journal. S-1

WANTED

WANTED—2 W. & P. Pulpers, 2 Filter Presses and 1 Rogers Wet Machine. Address, Box 27-285, care Paper Trade Journal. tf.

WANTED—Second hand Slitter approximately eighty inches wide. Address, Box 27-482, care Paper Trade Journal. tf.

WANTED—Cooley & Trevor envelope machine, bank size. Address, P. O. Box 323, Holyoke, Mass. S-1

FOR SALE

FOR SALE—Second-hand 1200 lb. wood tub N. & W. beater. In good condition. The Noble & Wood Machine Co., Hoosick Falls, N. Y tf.

FOR SALE—6 Used Jones Imperial Jordans, with bronze or steel fillings. Will sell "as is" or factory rebuilt. THE NOBLE & WOOD MACHINE CO., Hoosick Falls, N. Y. tf.

FOR SALE—One second hand Noble & Wood beater, 1800-2000 lbs.; Two Jones 1500 lbs.; Two Dillon 1400 lbs.; Two Dilts 1200 lbs.; Six Dayton Beater & Hoist 1400 lbs. AS IS, or will rebuild them into High Speed Beaters to travel 80 to 110 feet per minute. Leo Shlick Engineering Company, 314 Beacon St., Boston, Mass. S-8

FOR SALE—1 Smith & Winchester Cylinder Drying machine, 39 Dryers, 42" diameter, 85" face, 2 cylinders, 1 calender stack. Address, Box 27-513, care Paper Trade Journal. S-1

FOR SALE

FOR SALE

1—72" Hamblet Single Cutter with 24 roll back stand.
1—84" Beloit heavy duty duplex.
1—84" Black-Clawson heavy duty duplex, with duplex slitter.
1—52" Moore & White Cutter with Moore & White Layboy and Backstands.
1—48" Moore & White Cutter with Moore & White Layboy and Backstands.
1—42" Moore & White Cutter with Moore & White Layboy and Backstands.
1—60" Hamblet Cutter with 10 roll Backstands.
1—110" Moore & White Cutter with Moore & White Layboy and Backstands.
1—82" Heavy duty Hamblet Single Cutter with 24 roll Backstands.
2—58" Moore & White Single Cutters.
4—54" Moore & White Single Cutters.
6—48" Moore & White Single Cutters.
1—57" Hamblet Duplex Cutter, Heavy Duty.

The Shartle Brothers Machine Co.,
Middletown, Ohio tf.

PAPER MACHINES

For Sale

In good condition. Immediate delivery.

One 2 cylinder machine. 2 presses; 10 dryers 42" x 84"; one calender; reel; single drum winder; Marshall drive.

One Fourdrinier machine. Wire 96" x 50'. 2 presses; 15 dryers 48" x 94"; one calender; reel; two drum winder; Marshall drive.

By: FRANK H. DAVIS COMPANY
175 Richdale Avenue Cambridge, Mass.

FOR SALE

2—Iron tub Beaters, practically new. Rolls 70 x 66. Made by Emerson Mfg. Co.

1—Wood tub Beater, practically new. Roll 70 x 66. Made by Emerson Mfg. Co.

2—Dilts Beaters, iron tubs. Rolls 54 x 62. A-1 shape.

1—Heavy duty Beloit 114" Paster.

4—Jones Washers. Iron tubs. Rolls 67 x 60. Good shape.

1—Dayton Beater and Hoist Iron tub Beater. A-1. Rolls 64" diameter, 54" face.

1—Breaker Roll 64" diameter by 54" face.

1—Downingtown Iron tub Beater with Brownell Buehler perforated back fall. Rebuilt for immediate shipment. Roll 44" x 44".

The Shartle Brothers Machine Co.
Middletown, Ohio tf.

FOR SALE

HEADQUARTERS

For Good Used Machinery

ROTARY DRYERS AND KILNS
6—4' x 30' American Process.
2—6' x 60'.
1—6' x 100'.
1—8' x 125'.

PULPER MIXERS
1—W. & P. size 17-200 gals.
Also several smaller sizes.

TUBE AND ROD MILLS
1—3' 6" x 12' Allis Chalmers.
1—4' x 16' Schmidt.
5—5' x 22' Allis Chalmers.
7—5' 6" x 22' Schmidt.
1—6' x 22' Gates.

SULPHUR BURNERS
1—3' x 8' Glens Falls.
4—4' x 16' Glens Falls.
4—4' x 20' Glens Falls.

EVAPORATORS
1—Stokes Triple Effect, 1,000 sq. ft.
1—Scott Triple Effect, 1,350 sq. ft.
1—Swenson Triple Effect, 1,750 sq. ft.
2—Swenson Triple Effect, 3,300 sq. ft.

ROTARY FILTERS
2—6' x 4' Oliver.
2—6' x 6' Oliver.
2—6' x 6' Oliver, Acid Proof.
1—8' x 8' Oliver, Acid Proof.

SEND US YOUR INQUIRIES
WE BUY YOUR IDLE EQUIPMENT

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Barclay 0063

ENGINES FOR SALE

ERIE BALL variable speed engine, 176 H.P. @ 260 R.P.M., 76 @ 86 R.P.M.

ERIE BALL constant speed engine, 215 H.P. with 20 lbs. back pressure. 278 H.P. no back pressure.

Both in excellent condition and for immediate delivery. Reason for sale, changing to electric drive.

BIRD & SON, Inc.
East Walpole, Mass. S-1

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SACRIFICE PRICES

From Storage

Wilmington, Vt. and St. Louis, Mo.

1—Triple effect Yaryan Horiz. type Evaporator, with pumps, piping, etc. Capacity 1200 gals. liquid per hour with a concentration of 50%.
1—450 sq. ft. new Yaryan Heater.
2—9' dia., 30' long Manitowoc Incinerators with drives.
1—84" Union Iron Wks. Chipper, 30—20¾" knives.
1—83" Baker Mfg. Co. Chipper 4—16" Knives.
4—150 H. P. Dillon Boilers, 150 lb. pressure.
1—750 G. P. M. Fairbanks Morse Fire Pump.
Several Centrifugal Pumps, 2" up to 12".
3 phase, 60 cycle, 550 volt Motors, 10 to 100 H. P.
4—50 K. V. A. G. E. Transformers, 2200 volt—575 V.
1—84" Carthage Chipper.

TECHNICAL ECONOMIST CORPORATION
40 RECTOR STREET
NEW YORK, N. Y.

FOR SALE

We offer for sale the mill of the former Saratoga County Paper Company, located at Ballston Spa, New York, or the contents of said mill, consisting of excellent 68" trim Sandy Hill Board machine; four 1000 lb. beaters; Number 4 Nash Hytor Pump; 72" Hamblet Rotary Cutter; Variable speed engine, etc.

Address:

Gibbs-Brower Company, Inc.

Paper and Pulp Mill Brokers

261 Broadway, New York City—Telephone Barclay 8020

166 W. Jackson St., Chicago, Ill.—Telephone Harrison 0151

OUR MOTTO—"Service First"

Little Classified Advertising Placed in These Columns Brings Satisfactory Results

HELP WANTED

WANTED—First-class Fourdrinier machine tender on high grade papers. Must be steady and reliable. Excellent living conditions. Address, Box 27-505, care Paper Trade Journal. S-15

MACHINE TENDER—An Eastern manufacturer of light weight paper desires a man experienced on fast news or book machines. Your application must include your age, education, experience and wages desired. Address, Box 27-507, care Paper Trade Journal. S-1

WANTED—BEATERMAN: A good, sober steady man for container board mill, two towers. Good position and wages to proper party. Address, Box 27-506, care Paper Trade Journal. S-15

YOUR BOSS—An Eastern manufacturer on light weight paper desires a man with several years experience. The right man must show a good production record, and capable of taking an active interest in safety and sanitation throughout our plant. To receive consideration your application must include your age, family status, education and paper mill experience and past earnings. Address, Box 27-508, care Paper Trade Journal. S-1

WANTED

WANTED—82" or 92" second-hand Slitter and Rewinder. Must be first class condition. Address, Box 27-510, care Paper Trade Journal. S-15

SITUATIONS WANTED

SUPERINTENDENT, used to all grades of paper and all makes of machines, wants to make change. Good mechanic and color man. Address, Box 27-511, care Paper Trade Journal. S-1

DESIRES POSITION as assistant superintendent or boss machine tender. Used to all makes of machines and all grades of stock. Address, Box 27-512, care Paper Trade Journal. S-1

CHEMICAL AND TECHNICAL CONTROL DEVELOPMENT—Chemical engineer, with experience in control, research and semi-commercial experimental work, seeks position in control development work. Address, Box 27-509, care Paper Trade Journal. S-8

FOR SALE

2—Swenson Vacuum Evaporators, Triple Effect, 3,300 sq. ft.

4—Carlson Disc Evaporators.

3—Carlson Rotary Incinerators.

Excellent Condition. Immediate Shipment.

J. C. PICKENS
Nitro, W. Va. S-1

BAG MACHINE

For Sale

New Fuller-Saxton Single Purpose Bag Machine. Length of tube—32¼", with two color printer attached. Cost $4500.00. Make offer. Must make quick sale. Address, Box 27-475, care Paper Trade Journal. S-1

FOR SALE

1—72" Model 10 Cameron.

11—Dryers 48" x 110".

60" trim Black-Clawson Fourdrinier machine.

Several White cedar stuff chests, A-1 shape.

1—48"—3 cylinder machine.

1—70"—2 cylinder machine.

Several Chippers.

Four deck Beloit frames. These are modern and extra heavy.

One Rythor & Pringle Multiple Saw Slasher. Will cut 32".

One Farrel Roll Grinder.

One No. 2 Lannoye Pulper.

One 61" Holyoke Super-Calender.

The Shartle Brothers Machine Company
Middletown, Ohio tf.

Your Card in This Space Will Bring Results

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Fourdrinier Wires, all widths up to 300 inches.

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More Uniform Product
Saving in Power
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FOR SERVICE
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INTERNATIONAL WIRE WORKS
Menasha, Wisconsin

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Valley Iron Works Co.

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Link-Belt Co.
Walmsley & Co., (Canada) Limited, Charles.

DRIVES, SHORT CENTER
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Nash Engineering Co., The
Walmsley & Co. (Canada) Limited, Charles

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Combustion Eng. Corp.

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Foxboro Co., Inc., The

GAUGES (PRESSURE, INDICATING AND RECORDING)
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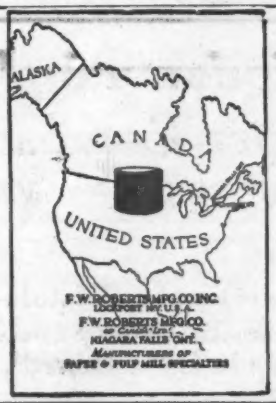

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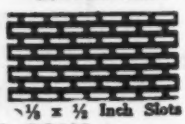

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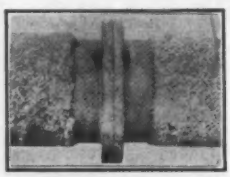

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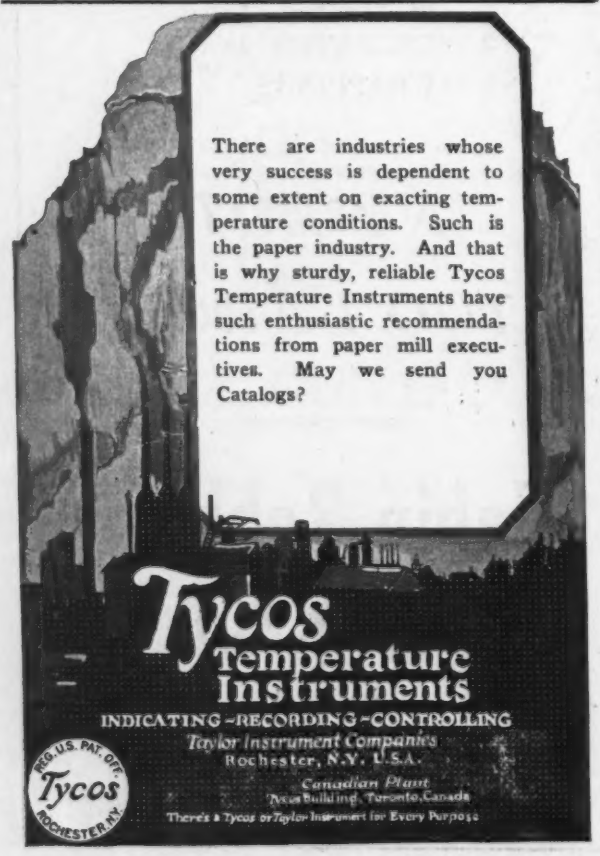
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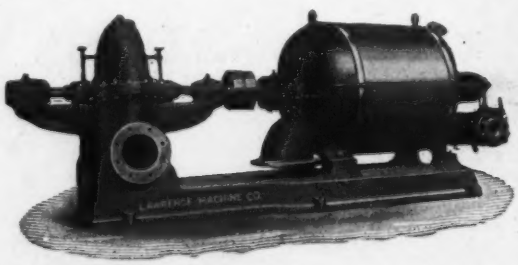

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